THE WORKSTATION NEWSWEEKLY

MacWEEK

$3.50

0 9 Volume 1

July 6, 1987

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"I was writing vertical applications. It was really boring. Then I got the idea for 4th Dimension."

ACIUS' vintage ace

Laurent Ribardiere, writer of 4th Dimension

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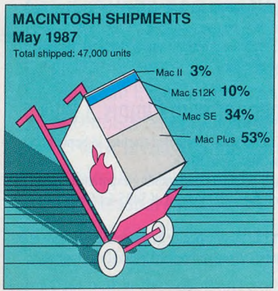
ZOOM IN



Source: June 1987 Creative Strategies

Micro-mainframe links get Mac 'look'

Apple prepares MacWorkStation software toolbox

BY JIRI WEISS

MacWEEK Staff

CUPERTINO, Calif. — Apple is readying a software toolbox that will allow programmers to give the Macintosh "look" to programs running on mainframes.

The new program, called MacWorkStation, is largely targeted at programmers of mainframe applications within corporate MIS departments who have little or no experience with Macintosh programming, says Norman Kline, product manager for communications and networking.

Apple plans to make a product announcement this fall, perhaps even at the Mac Expo, Kline says. MacWorkStation's price has yet to be determined.

"One of the complaints about the Mac is that it is hard to program," says Steven J. Bomba, vice president of advanced manufacturing technologies with Rockwell International of Milwaukee. "Anything that makes the Mac easier to use from the programming-design point of view will be a big plus."

MacWorkStation provides a set of tools programmers can use without learning the Macintosh toolbox. "It's object-oriented," says

See TOOLBOX, Page 24

WRITER PLUS

Writer Plus

Traitement de texte
pour Macintosh

Auteur : Roger Rainero

Editions ACI
6, Av. Franklin Roosevelt
75008 PARIS

Version 1.05 du 10 avril 1987

PAUL MORRELL

Parlez-vous Macintosh? WriterPlus word processor nears U.S. immigration

BY ABIGAIL CHRISTOPHER

MacWEEK Staff

PARIS — WriterPlus, a word processor developed and marketed in France by software developer ACI, may hit the United States when it has been debugged and new features have been added, according to company founder Marilyn Delburg-Delphis.

ACIUS, the Cupertino, Calif., firm that was also founded by Delburg-Delphis is not involved in the development of the program, Delburg-Delphis says.

However, ACIUS has used ACI WriterPlus internally. Brochures for its much-ballyhooed 4th Dimension database program, which shipped last week, were prepared with the French-language program.

ACIUS President Guy Kawasaki declined to comment.

ACI WriterPlus has been shipping in France for five months and already has an installed base of more than 3,000 users.

"I don't know when we will be marketing

See ACIUS, Page 24

HENRY HILLIARD

Thomas Vanderslice, Apollo CEO.

Apollo slashes costs; debuts 4-Mips machine

BY RICK LEPAGE

MacWEEK Staff

BOSTON — Apollo Computer Inc. last week became the latest workstation maker to hike performance and slash costs. Its new high-performance, 4 Mips (million instructions per second) workstations, the Domain Series DN-4000, will start at less than $13,000. Price cuts and enhancements to its Domain Series DN-3000 family were announced, as well as products that increase connectivity with IBM PCs.

The announcements come on the heels of recent price reductions on entry-level to mid-

See APOLLO, Page 24

Mac II a hit at Boeing, but Apple can't deliver

BY JIM BEAVER

MacWEEK Staff

SEATTLE — The Macintosh II has a home waiting for it in the Northwest if only it can find its way there.

The group at Boeing Commercial Airplane Co. that studied which computer and networking systems would best fit the 7J7 project, Boeing's sophisticated "next-generation" airliner, "loved" the Mac II.

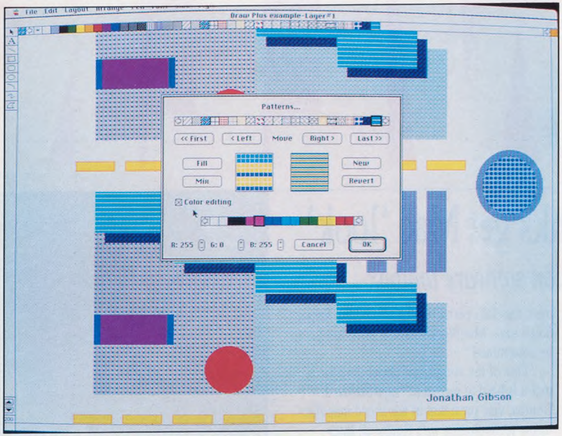
According to several sources at the company, the Mac II, which is expected to reach volume shipments in September, could move into a "strong position" on the 7J7 project. But as long as Apple Computer Inc. cannot reach volume shipments, Mac IIs are losing out to the approximately 400 PCs and workstations that move through Boeing's overall system each month.

As soon as Boeing's engineers get a good look at the Mac II, says one source at Boeing, the new computer is expected to "be a big hit."

One former member of the "options analy-

See BOEING, Page 24

MARK FARBIN



☒ Color editing

R: 255 G: 0 B: 255

Color and other advanced capabilities may be available in the yet-to-be announced Draw Plus. See Page 22.

Apple announces document-conversion software

BY CLAIR WHITMER
MacWEEK Staff

Dealers had interesting reading material last month when the June 15 AppleGram arrived. Subtitled The Dealer Executive Bulletin, the AppleGram announced the upcoming release of four Apple program updates and new software to convert between word processing document formats.

Scheduled to ship to dealers on July 15, the four programs are MacDraw 1.9.5, MacWrite 4.6, MacProject 1.2 and MacTerminal 2.2.

The RFT Converter was sent to desktop-communications dealers this month. It consists of two stand-alone programs that allow conversion of IBM documents created in DisplayWrite 3 and 4 into MacWrite 4.5 files, and vice versa. It also can operate under Switcher.

According to the bulletin, Apple will soon release a file exchange utility, which may be called Interfile or Passport, along with 5.25-inch disk drives for reading IBM files directly. Until this system is released, the Converter software allows file transfers when used with third-party transfer utilities such as DataViz's MacLink, Centram's TOPS or Dayna Communication's FT-100.

Apple has authorized dealers to copy both the disks and the manual for customers so that they will not need to order the Converter.

All four of the new program versions support both the single-launch and multi-user versions of the AppleShare file server. They also are compatible with the Macintosh SE and II.

The most significant changes are in the new version of MacDraw. Enhancements include support for up to 54 fonts and WYSIWYG text capability.

The program provides for Draw and PICT formats to be saved under the same name without loss of data, allows cutting and pasting across volumes and works properly with Desk Accessories.

The new MacDraw also launches faster and includes a zoom box in the title bar, additional command keys and a cancel button in the printing dialog box.

In addition to several bug fixes, the big change for MacProject 1.2 is added support for color. This makes it the only Apple program with color capability.

MacWrite Version 4.6 offers some unspecified bug fixes as well as support for arrow keys and an accurately scaled LaserWriter ruler.

The operation of the Enter key has been fixed in the MacTerminal upgrade and the program now permits the arrow keys to repeat in 3270 mode. ■

Apple delays release of new high-resolution monitor

BY CLAIR WHITMER
MacWEEK Staff

The release of the AppleColor High-Resolution RGB Monitor will be delayed until August, according to a recent AppleLink message.

The brief message, placed in the AppleLink Dealers' Bulletin, specified "production delays" as the reason for the date change.

Apple representative Cynthia Macon confirms the release will be delayed but says such delays are not unusual. The monitor is undergoing "quality-control" testing at this time.

AppleColor is not the only color monitor available for the Mac II. Sony s´Multi-Sync monitor is in retail stores and Sony should be shipping a cable to dealers this week.

Sony will manufacture the monitors for Apple. Dealers say they think the differences between a Multi-Sync and an AppleColor monitor will be relatively minor, such as changing the casing color to platinum and adding an Apple service contract.

Macon says Sony will be producing a significantly improved monitor, including a different tube, built to Apple's specifications "It is not the same monitor," Macon says.

SuperMac Technology is delaying until fall shipments of its new Trinitron monitors. The cost of the monitors has not been determined, according to Tom Rielly of SuperMac. ■

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LATE NEWS

Task force considers merger of information industry groups

NEW YORK — ADAPSO, the association of data processing service organizations, and the Information Industry Association (IIA) may merge if a recently formed joint task force gives the go-ahead.

The boards of directors of the two associations resolved to form an 18-member task force to "explore the advisability and feasibility and advantages and disadvantages of a merger." A recommendation based on its findings is due by Dec. 1. Appointments have not yet been made.

ADAPSO has more than 950 members representing companies in six industry areas: microcomputer software, network-based information services, processing services, professional services, software products and value-added resellers.

The IIA has about 500 members with divisions for database and publishing, electronic services and financial information services.

According to ADAPSO spokesman Christopher Carleton, the two groups have been overlapping in some areas and have 50 member companies in common.

Though it is not clear what effects a merger would have on staffing and administration, the organizations hope that "added clout on Capitol Hill will be one result," Carleton says.

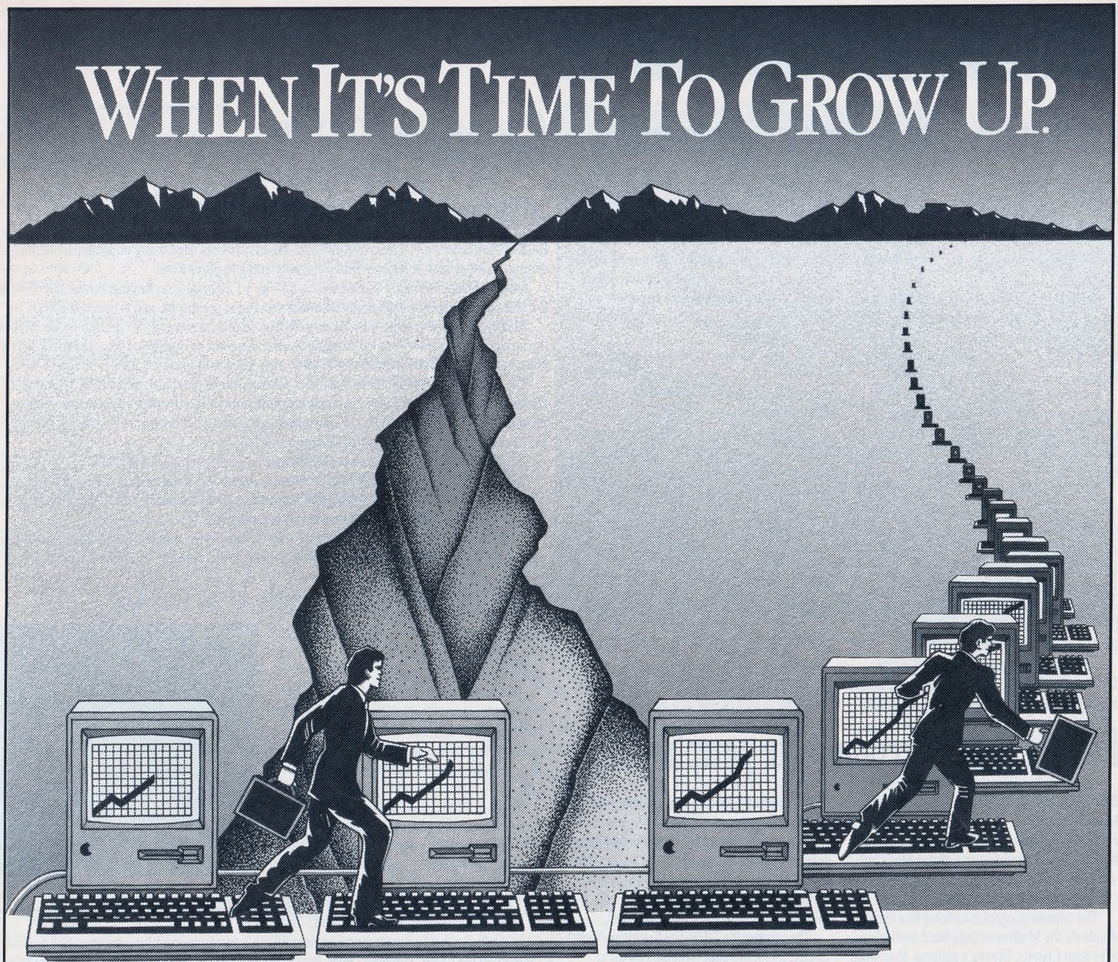
He says that for now such clout would come through the prestige usually garnered by large organizations, not influence on behalf of any lobbying effort.

Blyth to bundle application generator with Omnis 3 Plus

SAN MATEO, Calif. — Blyth Software's Omnis 3 Plus will be bundled starting in September with an application generator called Omnis Express, also from Blyth.

The stand-alone program is designed to let people with no programming experience quickly start using an Omnis database. The package will sell for $575, instead of $495 for Omnis 3 Plus alone.

Instead of having to create an application, users can automatically generate the structure of an Omnis 3 Plus database, complete with screen layouts, menus and reports based on information supplied by the user.



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Cricket upgrades graphics programs

BY JIRI WEISS
MacWEEK Staff

PHILADELPHIA — Cricket Software plans to release upgrades to its Cricket Draw and Cricket Graph programs by the Mac Expo in August.

Release 1.1 of the $295 Cricket Draw, an object-oriented graphics program, features 25 percent to 40 percent faster processing and the ability to separate colors on a Linotronic typesetter, says Jim Rafferty, company chairman.

Release 1.2 of the $195 Cricket Graph, a business graphics program that generates 12 kinds of graphs, has a new spreadsheet look. The release has 2,700 rows and 100 columns for data entry.

Other features include adjustable column width, with up to 31 characters per cell and 48 plot symbols and line types for plotting graphs. Users can now import data from Lotus' Jazz spreadsheet in addition to SYLK files generated by Microsoft's Excel.

Cricket Draw 1.1 also has eliminated some bugs. Large PostScript files no longer hang up the Linotronic typesetters, Rafferty says.

The ability to separate colors in Cricket Draw means that users can prepare color art ready for the printer. However, the technique is complicated and intended for the artist who is willing to spend a little time, says Rafferty.

The screen layout of Cricket Draw is different, too. The visible page is now displayed like a sheet of paper on the screen, with dotted lines indicating the edges of the printed area. Users can edit graphic objects anywhere on the screen, even off the page, and move them into position later.

The program also allows easier manipulation of objects, the company says. Users can select objects within objects without having to move everything out of the way first.

Users also will be able to have color gradation running across an illustration from corner to corner as well as horizontally and vertically, a technique called fountaining. (See Cricket illustration on Page 17.)

Cricket Draw now allows users to import Encapsulated PostScript files from other applications, such as Adobe's Illustrator, according to Cricket.

Both Cricket Draw 1.1 and Cricket Graph 1.2 will be released between the end of July and the August Mac Expo in Boston, Rafferty says. Users buying the program after a yet-to-be-determined cut-off date will get an update free. Others will be charged $20 to $25. ■

Everex moves to dominate peripherals

BY MARY FRIEDLAND
MacWEEK Staff

FREMONT, Calif. — Everex Systems Inc. threw down a gauntlet to traditional Mac hardware suppliers with the release of a dedicated file server and a hard-disk drive.

The company's goal is nothing less than "to dominate the Macintosh peripheral world," says Stan Chavez, Everex's national Macintosh sales manager. "We have already dominated IBM [peripherals]."

Now it intends to grab a similar share of the Macintosh market before the end of the year.

With an IBM AT-compatible computer system and 30 IBM peripheral products on the market, Everex is well-situated to expand. The 4-year-old firm is expected to yield $150 million this fiscal year. Dun & Bradstreet Corp. reported that there have been generous infusions of venture capital and equity financing into the company.

On June 17, Everex announced its intention to sell stock publicly. Two days earlier, the company had shipped its first Macintosh products, including a 261-Mbyte dedicated file server with a 75-Mbyte tape backup, Model EMAC-FS100. The $14,000 product interfaces with Apple's AppleShare networking software and third-party systems like Centram Systems West's TOPS.

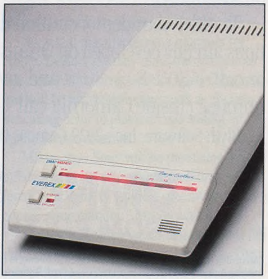
According to Chavez, the file server's access time, between 20 and 21 milliseconds, is among the fastest for Macintosh products and the tape backup, at 5 Mbytes per minute, is "the fastest by far for Macs."

A 20-Mbyte external hard-disk drive, Model EMAC20-D, also was shipped June 15. Suggested list price is $995.

During the last week of June the company began shipping a stand-alone tape backup unit and an external modem. The 60-Mbyte tape unit, Model EMAC 60T, backs up at 3.5 Mbytes per minute and retails at $1,395.

The company's 2,400-baud modem, Model EMAC 2400, has auto switching down to 1,200 baud and 300 baud. It has adaptive equalization for incoming data signals and a "voice-data switchable feature" that allows users to communicate interchangeably between computer screen and telephone. The modem is $499.

Everex's product blitz is not over yet, Chavez says. A 40-Mbyte hard drive and several tape-hard disk combinations are slotted for August release. By the fourth quarter, the company says it expects to be marketing 15 products for the Macintosh. ■



COURTESY EVEREX

Everex's 2,400-baud modem, Model EMAC2400.

SNAPSHOTS

Networked Macs share Shiva modem

CAMBRIDGE, Mass. — Users of AppleTalk-based networks need worry no longer about hosts of dedicated phone lines or legions of modems, according to Shiva Corp.

Shiva has begun shipping its NetModem V1200, a 1,200-baud modem that can be shared by all the Macs on an AppleTalk network. The modem is Hayes compatible and is priced at $599.

Because the modem plugs into the network instead of a computer it can be used by any Mac on the network. The software can be installed on each computer or distributed through the file server. Once installed, the Control Panel can be set to alert the user of incoming calls or to ignore them.

The modem is compatible with most telecommunications programs except those requiring a telephone port because that is the port that the modem uses. The shareware telecommunications package Red Ryder 9.4 is among the incompatible programs, but the bug responsible is being fixed, according to Bruce Twickler, president of Shiva.

A list of incompatible programs and a software-upgrade package are included.

To prevent traffic confusion, a message system alerts users if the modem is busy and specifies who is using it. Those who are waiting are informed when the modem is free. Other features include the ability to hear the modem connection through the Macintosh speaker.

NetModem developer Dan Schwinn says a 2,400-baud version should be available within three to four months, depending on the availability of the required chip.

Samurai mouse to invade U.S. market

OAKLAND, Calif. — Beware mice! Beginning this month, the Samurai mouse will attack the U.S. mouse market.

The Samurai is produced by NEOS Co. of Japan and imported by Qualitas Trading Co. It is compatible with most IBM-compatible computers as well as the Macintosh, though the Mac version requires a different connecting cable.

Priced at $79.95, the Samurai comes with a software driver program. It is designed to provide quiet operation without the use of a pad, thus taking up less room on a desktop.

COURTESY QUALITAS TRADING CO.

Great Plains offers purchase order package

FARGO, N.D. — Macintosh users can now fill out a purchase order for a program that will do it for them in the future. Purchase Order, the eighth program in the Accounting Series from Great Plains Software, has just started shipping. Priced at $395, the program is the latest addition to Great Plains' financial-management package for small to medium-size businesses. It is compatible with any Mac at least 512K, the 3.2 or higher operating system and a 20-Mbyte hard disk.

Purchase Order includes four types of order formats: regular, for orders placed once and expected to be filled with a single shipment; recurring, for inventory reorders; drop ship, for merchandise shipped directly to the customer; and blanket, for a series of shipments of a single item. These basic forms can be adapted by the user.

The basic purchasing data is combined with the capability to analyze purchasing requests to avoid repetition or inefficiency. Shipments can be made with or without an invoice. If used with the other programs in the series, Purchase Order can be integrated with an inventory program and invoiced orders posted as vouchers to accounts payable.

Contact releases client management program

MARIETTA, Ga. — Sales people can now use a Macintosh for prospecting and client management with GYST (Get Your Stuff Together) from Contact Systems. Designed for sales, advertising and marketing people, GYST operates as a relational database and integrated appointment calendar, according to the company. The introductory price for the program is $99. After the August Macworld Expo in Boston, the price will go to $199. It is compatible with all Macs from the 512K to the II.

To develop the program, Contact Systems relied on its experience as a consulting firm. Instead of a marketing survey, the company tried to incorporate feedback from sales people and marketing professionals about their programming needs.

The client list classifies clients and records significant information about them and their product interests or preferences. Another field is provided for personal information, such as birthdays or favorite sports. The fields are preset but are open to adaptation by the user.

All meetings and contacts with listed clients, including phone calls, can be recorded and the subject matter planned. This is combined with an appointment calendar and a "To Do" list.

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MacWEEK (ISSN 0892-8118) is published weekly, except for two weeks at year-end, by MacWEEK Inc. 525 Brannan St., San Francisco, Calif., 94107, a subsidiary of Patch Communications, 5211 S. Washington Ave., Titusville, Fla. 32780. Single copy price including postage: $5. One-year subscription rates: U.S. $75, Canada/Mexico US $150, International: US $300 (airmail). All orders must be prepaid. Application to mail at second-class postage rates is pending at San Francisco, Calif., and additional mailing offices. MacWEEK is an independent journal, not affiliated with Apple Computer Inc. Apple and Macintosh are trademarks of Apple Computer Inc. Entire contents copyright © 1987 MacWEEK Inc. All rights reserved. Material in this publication may not be reproduced in any form without permission.

POSTMASTER: Send address changes to MacWEEK, 525 Brannan St., San Francisco, Calif. 94107. Please allow six weeks for order and address change processing.

Mac CAD products build a following at A/E/C show

BY STUART SILVERSTONE
Special to MacWEEK

WASHINGTON — It was a long wait before Apple participated in the A/E/C Systems show, but when the firm appeared this year at the annual construction industry computer show, everyone responded enthusiastically to its CAD products for the Mac.

Response to Apple's products was so strong it has doubled its exhibition space for next year. The Apple booth and associated third-party displays were surrounded by visitors for all three days of the show.

Software products exhibited ranged from highly specialized construction industry applications to two- and three-dimensional CAD packages and general-purpose tools for construction industry uses.

One of the most unique CAD packages exhibited was a three-dimensional conceptual massing tool called New Studio. The tool, developed by architects who are also computer scientists, is designed to reflect the way many architects begin designing a building project. Although it has been demonstrated for more than a year, the product is not expected to be finished before 1988.

Other CAD products making an appearance included MiniCAD, SpaceEdit, MGM Station, Dimensions, Pro 3D, Mac 3D, MacDraft and Mac Architrion, a new entry from France.

Pre-show rumors that AutoCAD and VersaCAD would announce products ported from the MS-DOS environment proved to be unfounded.

Construction-specific packages shown included the structural engineering analysis tools from Chius Software, Buildese and Apple and the project and document management system, AEC Information Manager.

Several general-purpose Mac tools were shown with specific construction industry applications, including Data Tailor's Trapeze for desktop presentation of building system calculations, Quark XPress for technical and presentation document layout, and Micro Planner Plus from Micro Planning Software International for building project management.

Mac-based hardware peripherals shown included the high-resolution, large-screen color monitor for the Mac II from SuperMac, digitizing tablets from both Kurta and Pen Mac, output plotters from Hewlett-Packard and Versatec, and the scanning digitizer from Abaton Technology.

General construction industry products exhibited encompassed an on-line, cost-estimating database customized for the user's zip code from F.W. Dodge, and a CD-ROM version of the Sweet's Catalog File of construction products for electronic searching of the text database.

Judging from its first appearance at an A/E/C systems show, observers say the Mac has a promising future in the CAD-based construction industry. Quality software is now available and is, of course, promised to improve with future releases. ■

FRANK HERRERA

Creighton Nolte, a San Diego architect, uses MiniCAD on a Mac II with a SuperMac 19-inch monitor.

Borland, Migent to jointly market pocket-size modem package

BY KRISTINA B. SULLIVAN
Special to MacWEEK

Borland International of Scotts Valley, Calif., and Migent Software of Incline Village, Nev., will join forces in the Macintosh market by combining the communications features found in SideKick with a modem that fits in your shirt pocket.

The combination package is scheduled to begin shipping early this month.

The Migent Pocket Modem and Borland's MacTerm will be sold together, along with cabling, battery and AC adapter for $259.95, the price IBM PC and compatible owners now pay for the modem alone. MacTerm communications software is just one feature found in SideKick for the Macintosh, a Desk-Accessory package that sells for $99.95.

MacTerm also functions as a pull-down Desk Accessory, allowing users to set baud rates and send or receive files at any time, says Mari Latterell, a Migent product manager.

The 5-by-2.5-by-1.3-inch pocket modem is compatible with the industry standard, Hayes Smartmodem, and supports both 300- and 1,200-baud rates. It can operate both on battery and through direct power.

Although the pocket modem was designed to be used primarily by traveling computer users, Migent also is hoping to provide the Macintosh market with a sleek and different type of modem.

"The Pocket Modem, we think, is the first of its class, designed to be seen as well as used. It looks attractive on the desk and provides all the functions to get the job done in a very compact package," says Doug Kelley, director of marketing for Migent.

Migent officials view the joint agreement as the beginning of a long-term relationship.

"We see this as more than just a product relationship," says Kelley, who also says that the promotion could turn into an ongoing bundling agreement.

Migent has sold about 15,000 Pocket Modems since the product's first shipment earlier this year. The growing portable and laptop computer market has helped buoy sales, according to Kelley.

The bundling arrangement with Borland resulted in the second product to come from Migent's recently formed Apple Products Group. It also offers In-House Accountant, a low-end accounting package for the Mac, and plans to market by late summer a desktop-publishing package for the Macintosh code-named Lighthouse that is being developed by Nova Software Development of Los Angeles. ■

CORRECTION

In our June 15 issue (No. 6) on Page 13, Aldus' support for individuals was charted as offering 15 days of free technical support. It is actually 45 days. In the same table, Aldus was also charted as having 18 technical support people per 200 employees. It is actually 30 per 200.

PLEASE WRITE

To better serve our readers, MacWEEK welcomes all responses, comments and critiques sent through electronic (MCI MacWEEK) or regular mail.

Publishing professionals debate future

BY MARY FRIEDLAND
Special to MacWEEK

SAN FRANCISCO — Desktop publishing pacesetters pricked the bubbles of optimism raised by publishing professionals eager to embrace new technology at PubForum, a symposium on publishing industry trends here.

But the news was not all bad at the June 24-26 symposium, sponsored by Bookbuilders West, a consortium of West Coast book publishers.

Corporations sink 5 percent to 10 percent of their gross revenues into publishing, said Jesse Berst, co-author of Inside Xerox Ventura Publisher. Designed pages have replaced typed ones as the corporate norm. Desktop systems, strategically applied, can cut the cost of corporate publishing 30 percent to 70 percent.

Panelists reviewed practical issues that companies face in converting to desktop publishing. A big decision for initiates is whether to use Macintoshes or IBM PCs.

A Mac is easier to use, said Berst, because of its user interface and standardized equipment. But desktop-publishing applications eat up speed and power, options that are more readily loaded into an IBM.

Connie Greaser, head of publications at RAND Corp., a think tank in Santa Monica, Calif., and other panelists at the symposium lauded desktop equipment for its ability to directly link authors in a company to the publications department. But they cautioned that conversion to desktop publishing can wreak havoc in design.

Page-layout programs, with their abundance of options, are fun. Authors typically get carried away with the options and want to "design" their own documents, making full use of the options. "Just because you can use 14 different typefaces on a page doesn't mean you should," said desktop consultant Paul Butzler of Emeryville, Calif.

John Meyer, president of Ventura Software, likened the typography of beginners' documents to "wearing madras with plaid."

While misguided desktop publishing can produce "God-awful" results, industry insiders cited many compelling advantages of desktop systems.

Butzler said desktop publishing can eliminate out-of-company production work. And low-cost LaserWriter output makes it easy to experiment with design schemes.

Butzler cited savings by the California Medical Association. After purchasing a desktop-publishing system, composition and paste-up costs on its monthly magazine plummeted from $30 to $5.50 per page.

Panelists addressed the issue of how to use the hardware. With standard laser printer resolution at 300 dpi, and 600 and 1,200 dpi in the wings, do we still need typesetters?

Sanjay Sakhuja, a desktop publisher in San Francisco, recommended using laser printing systems to experiment and proof, as "front ends" to a typesetter.

Most presenters at the symposium said the new scanners, capable of gray-scale output, were not worth their high cost and memory demands. Existing software does not take advantage of scanned images, and existing hardware has difficulty processing gray scales.

Dolly Steyer, who runs a design studio in San Francisco, demonstrated scanning at its slickest. Steyer's system includes a video scanner that scans objects similar to the way a camera takes photographs, producing photo-quality output. She said scanners offer the best in graphic arts technology.

Sakhuja predicts expansion for desktop publishing. "Desktop publishing is a billion-dollar industry that will improve dramatically in the next six months," he said, adding that companies such as Aldus and Adobe are pumping windfalls from public stock sales into research and development. Watch for major breakthroughs, he said, in scanning software that produces high-quality halftones, thermal printers for proofing color images and film recorders for color slides and animation.

In contrast, Ventura Software's Meyer said the future of corporate desktop systems is "not very bright" because software companies have failed to produce a page program that is automatic. "Not only are users producing bad stuff;" Meyer said, "they are doing it at a snail's pace." Meyer said, "Some [page layout] software companies give seminars trying to teach [beginning] users to be designers. That is a fruitless task."

Style sheets that standardize elements in a document, Meyer said, are the key to automation. Ventura Publisher's page layout program is based on style sheets. ■

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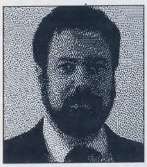
THE LONG VIEW



Lawrence Magid

When I was a lad, someone asked me "Which city is farther west, Los Angeles or Reno?" Since L.A. is on the coast and Reno inland, the answer seemed obvious. But I was wrong.

Now I'll ask a question: Which computer is most expandable, the Mac II, Mac SE or Mac Plus? Unless this is 1988 and you are reading an old copy of MacWEEK, the answer is the Mac Plus. I know the Mac SE has an expansion slot for dealer-installable options and the Mac II has its NuBus with six user-accessible slots. But the fact is that today, the Mac Plus has more available expansion hardware.

Eventually there will be plenty of options for the newer machines. If you're buying a new Mac with expansion in mind, I would recommend the II or SE. But if you have an older Mac, do not despair. There is plenty of life in the old gal and a lot of room for growth.

Recently I have been testing the TurboMax board, from San Jose, Calif.-based MacMemory Inc., for the Mac Plus and Mac 512K Enhanced. The card, which retails for $1,299, about doubles the Mac Plus' operating speed and available memory. MacMemory chose to use a version of the 68000 that runs at 16 MHz, twice the clock speed of Apple's 68000. The card also includes a special SCSI port that is said to operate considerably faster than the one that comes with the Plus. When installed on a 512K Mac, it adds a needed SCSI. The board comes with enough RAM to upgrade a Plus or a 512K to full megabytes.

MacMemory Executive Vice President John Foley said the company selected the 68000 instead of the 68020 used in the Mac II to ensure full compatibility with Mac Plus software. The only compatibility problem I had was with the Easy Access file that comes with System 4.1. That file, which makes it possible to use the Mac with one hand, had to be removed from the System Folder. Once I did that, all my software, including programs that will not run on the Mac II, ran perfectly. The MacMemory board can accommodate an optional 68881 math coprocessor, which speeds up math-intensive operations by as much as 60 times, according to Foley.

If doubling your speed is not good enough, then why not upgrade your Mac Plus or Mac 512K Enhanced with the same 32-bit CPU used in the Mac II. Radius and Levco both offer upgrade boards with a 68020 CPU. The Radius Accelerator, at $999, is the least expensive of the bunch. Unlike the MacMemory board, the Radius Accelerator does not come with additional memory, though it is compatible with the 1-Mbyte SIMM memory modules that you can add to any Mac.

Levco has created a lower-priced version of its legendary Prodigy board for the Mac Plus and 512K Enhanced. The Prodigy Prime sells for as little as $1,899 and gives you a 68020 CPU and 1 Mbyte of RAM. Both Levco and Radius will offer similar cards, at the same price for the Mac SE.

If you are going for Mac II performance, you might also want a larger screen. Large screens have been available for the Mac Plus for more than a year. The Radius Accelerator board is fully compatible with Radius' Full Page Display and the MacMemory board has an interface for E-Machines' 17-inch "The Big Picture" display.

Apple acted as if it was revolutionizing the world by putting a 20-Mbyte hard disk into the SE. General Computer put a hard-disk drive into a Mac about two years ago. Now, there are several optional internal and external drives for the Mac Plus, many of which store 40 or more megabytes. If you buy an SE, you are stuck with Apple's drive or a system with two floppy drives. The Mac Plus gives you more options.

Any of the Macs can be upgraded with additional memory. Boards that upgrade a Mac Plus to two or more megabytes have been available almost since the machine came out. It is cheaper and easier to upgrade a Mac Plus or a 512K than an SE or Mac II. Sure, that will change, but I am talking about now.

When you compare the Plus to the SE from the expendability standpoint, remember that the SE has only one slot. Unless someone develops an expansion chassis or some mighty versatile multifunction cards, owning an SE will be like being a kid in a candy store. There may be lots of wonderful things, but your mother will only let you have one. ■

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Audacious ad agency runs on Macs

DFT would not lie about its love affair with computers

BY ELINOR CRAIG
MacWEEK Staff

LOS ANGELES — Joe Isuzu stands next to a car, smiling, staring us right in the eye, while he lies through his teeth. Insincerity is plastered all over his face and drips from every word.

This successful new TV spot, a good-natured spoof on truth in advertising, is one of a new wave of ads for Isuzu Motors Inc. from Della Femina, Travisano & Partners, one of the top-rated advertising agencies in the country, and — on the West Coast, at least — it runs on Mac computers and a custom-written UNIX-based network called UltraOffice.

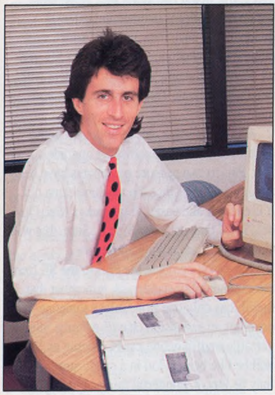
DFT's Los Angeles office overlooks the La Brea tar pits where, centuries ago, dinosaurs roared their way closer to extinction. Not DFT. It has responded to the times.

"We wanted a computer system that would be used and not just sit in the corner gathering dust," says Marge Powell, vice president and director of administrative services. "And we wanted something that would not take a lot of training time, that was user-friendly like the Mac."

"For secretaries, especially in our business, the work can be boring and repetitive," she says. "Flow charts and media graphs have to be done over and over again as the information changes. And they have to be done for each account.

"The Mac has helped our secretaries go beyond, to more advanced tasks, such as marketing functions. Now the position is a steppingstone for promotion, which was not the case before. We get a better quality of person for the job, and they stay with us longer. In my opinion, employee satisfaction is the biggest feature of the Mac."

Della Femina, Travisano & Partners, founded by Jerry Della Femina (rhymes with subpoena) and Ron Travisano in 1967, is known for being an irreverent agency. Della Femina is the fellow who, in a board meeting to discuss the Japanese Panasonic account, suggested the slogan: "From those wonderful folks who brought you Pearl Harbor!" The quip was met, he recalls, with dead silence; the line was never used.


MARK RICHARDS

Patrick Adams brought the first Mac into DFT.

DFT started as a so-called boutique agency, offering creative services only and forfeiting marketing research and administration. When they failed to make the splash they had hoped for, Della Femina and Travisano spent their last, lonely dollars to throw a huge bash and invited both their competitors and their competitors' clients. It was the only way they could get their ears.

Their audacity paid off. Today, DFT is well-established as a major national agency. Its client roster includes Beck's Beer, Carl's Jr. restaurant chain, TransAmerica Corp., PSA Airlines and, of course, Isuzu.

At last count, there were 33 Macintoshes in residence at DFT, with 12 more on the way. There also are two LaserWriter printers and 32 ImageWriters.

DFT's first Mac came through the door thanks to Patrick Adams, senior account executive for the Carl's Jr. account. He had attended an advertising seminar where he got to fool around with a team member's Macintosh.

That day, Adams produced a proposal. The next day he produced a request to his superiors, asking for a Macintosh of his own. It was approved immediately; six months later he was the envy of DFT.

Actually, Adams' computer was one of three to be introduced to the agency during the same short period. His proposal had coincided with an administrative decision to look into computerizing the offices. Lutzky-Baird, a computer consulting and developing company in Culver City, Calif., aided DFT in its computerization plan. Sally Rosenthal, a systems supervisor, was hired to develop and maintain the system. It went smoothly, and shortly thereafter 10 more computers were added. Then the floodgates opened; everyone wanted a Macintosh.

"DFT business demands an unbelievable amount of paper work," says Powell. For word processing, most people use MacWrite — with Microsoft Word and Microsoft Works to handle different formats.

When the ad execs pitch a new account, their presentations include organizational charts, corporate structure designs and statistical media graphs, all of which need to be blown up and mounted. For these they use MacDraw.

And for the seemingly unending flow charts, graphs, database control and macros for budget information, they use Excel.

"We have our fair share of games, too," says Rosenthal. "Lots of people have backgammon. But I don't have any games in my office now." She frowns. "Every day at five o'clock, I found myself playing backgammon, whether I had work or not. I had to remove everything. I have no self-control!"

MARK RICHARDS

Joe Isuzu, the fast-talking, insincere spokesman for Isuzu Motors, is one of the many successful advertising campaigns developed by Della Femina, Travisano & Partners, with the help of its Macs.

The network at DFT is UltraOffice, developed by Lutzky-Baird, which combines a UNIX-based file server (or host) computer with Macintosh workstations.

It also can accommodate IBM PCs and other computer workstations, up to a total of 40 or 50 users. It provides a friendly, Macintosh-like user interface with icons and pull-down windows to "tame" the tough UNIX file structure. Hence, users do not have to understand the complex UNIX command-line language.

"The UltraOffice system is intuitive in structure," Rosenthal says. "You don't have to know the name of a file to find it. It does searches for names, numbers, details like that."

With an icon image called a node, the user pulls up a file by following a flow chart, or family tree, connecting nodes labeled by account, department, section and person.

"With this system, a person needing to access a file doesn't need to know the exact name," says Rosenthal.

UltraOffice also includes an electronic mail system. And, looking to the future, DFT is developing a communications system to connect all field offices with the main branches. Software will do all the work. Wendy Storch, handling the Carl's Jr. account in Fremont, Calif., will be able to turn on her Macintosh Plus and click on "Talk to L.A." Then she will be ready to check out files from the system library.

The integration of computers into the day-to-day work routines of DFT went smoothly because of careful planning, says Powell. "We bought the computers in batches," she says, "and expanded areas of use within departments. Unlike most businesses, DFT started with the business end, moving progressively into the creative sections."

One computer was devoted to each top account, with an additional one going to accounting. The next phase included "Macentizing" the traffic department. The creative department will be receiving its Macs in several months.

Pilot groups were set up, with individuals chosen for their ability to learn.

Then, in-house teaching was set up for the groups, with regular user meetings to exchange new experiences and information. "They were definitely the celebrities of the company," says Powell, laughing. "Everyone suddenly wanted a Macintosh, and choosing new users became quite political."

"They learned so fast," says Rosenthal. "Staff training was so minimal it couldn't even be considered a cost factor. One month later they brought the network on. It was always part of the packaged plan; DFT never wanted single workstations."

If user-training worked well, disastrous network hardware was the flip side — at least at first. The initial installation was a classic horror story. The first file server was a Zylog. "We were a beta tester," says Rosenthal. "It crashed about 15 times a day, but it was obviously a lemon."

Unfortunately, a second Zylog was not much better. When too many people tried to use an application, the screen would go blank and the system would go down. This happened once or twice a day, wreaking havoc with deadlines.

"It was not compatible with our network," says Rosenthal. "It was heat-sensitive; it was even sensitive to power surges from the Coke machine!"

Since switching from the Zylog file server five months ago, however, DFT has had virtually no problems with the network or the computers. The replacement file server, "Mighty Frame," with 280 Mbytes of hard drive and 5 Mbytes of RAM from Convergent Technology of San Jose, has not gone down once.

"Workers even turned it off without bringing the network down, jiggled it across the room and put it back before I found out," says Rosenthal. "When we turned it back on, it picked up right where it left off. It is a workhorse."

It has been several years since the Los Angeles office of DFT Mac-entized itself. Now, the New York office staff is so impressed with the speed and slickness of the product their West Coast peers are producing that they are planning a Macintosh network of their own. ■

Consultants should be salvation, not scourge, of managers

BY KATH WILLIAMS
Special to MacWEEK

Help!

Sooner or later the cry goes out. Even in a "Macintosh office," the dreaded call may eventually be heard.

Where to turn when the Macs will not do what needs to be done and the technical wizard two desks down is stumped? How can businesses find solutions to network crashes, telecommunications static and spreadsheets that eat too much memory? Enter the computer consultant.

Consultants can be found in the Yellow Pages or on CompuServe or via word-of-mouth, but "letting your fingers do the walking" may not get you the service you need or expect. There are plenty of horror stories about companies taken to the cleaners, consultants who dropped the ball.

In the best sense, consultants are teachers, instructing people how to use computer hardware and software to their best advantage. They can be training specialists, writers, computer hackers, programmers or plain, old-fashioned efficiency experts. In some cases they hold classes for end users. In other situations they analyze customer needs and suggest hardware/software solutions to MIS. They write macros; design, install and troubleshoot networks; customize off-the-shelf software; and hold the hands of anxious executives who are not quite sure where to spend their money.

Hiring a consultant need not be exorbitantly expensive. A recent, informal survey of working consultants reveals that even a top-of-the-line expert should not charge more than $120 an hour, and many competent consultants can be had for half that price. If your business is facing a serious computer crisis, that can be money well-spent.

One of the best ways to avoid becoming a horror story yourself is to deal with a reputable agency or clearinghouse. "We're problem solvers," says Charlie Hanna, of Consultants Elite of Parsippany, N.J., a firm specializing in uniting companies and consultants. To protect the client, Hanna requires his consultants to concentrate on the one area they are best at.

"That tells you more about a consultant than anything," he says. "They can't be good at everything. And if they have to tell you one thing, they usually are great at that. We're servicing companies like AT&T and we provide a wide choice of experts. Consultants always say they can do anything, and ultimately they learn at the expense of the client."

Understanding the needs of the client is essential in the computer-consulting business, says Carl Haberle, founder of The Mac Studio, a consulting firm based in San Francisco. "This is a people business, and hackers just don't understand that. My consultants must learn about the company's business first."

Haberle says his standards are so high, he has trouble finding enough professionals to fill his consulting needs. "Consultants are weird birds to catch. They are independent contractors and they don't make good employees."

With IBM, you marry a consultant

Mac users who hire consultants have an instant advantage over PC users, according to Haberle. "With IBM, you marry a consultant," he says. "With Mac, my consultants can be in and out because company employees can quickly become proficient enough to make day-to-day changes. There's no way that can be done in the IBM environment."

Citing a recent job in a doctor's office, Haberle says his consultants set up a Mac system, and it was four months later before any adjustments had to be made. "The doctor wanted to use some odd-ball forms and our consultant was able to solve his problems in a couple or three hours," Haberle says.

John O'Leary's needs have baffled many consultants. As convention hall manager for the 1984 Democratic National Convention in San Francisco, O'Leary cried for computer assistance a year in advance — and that was not soon enough.

The convention needed a computer consultant who could work in "organized chaos," O'Leary says. Finding that person presented special problems. Many consultants walked away at the proposal stage, and the director of the California firm that was almost chosen admitted later he could never have handled it.

"I had to crystal-ball the needs for media arrangements, housing office, credentials department, volunteers and administrative offices," says O'Leary. "We were setting up a computer system for offices and staff that didn't exist yet but had to be functional immediately."

The 1984 convention was the first to make extensive use of PCs, and O'Leary laments the fact that Macintosh had no track record. The consultants he ultimately hired — Sammons and Associates of Berkeley, Calif. — used NCR workstations but brought in 10 Macs six weeks before the convention. "We ended up using MacPaint for graphics and design in the convention hall plus MacDraw, MacWrite and a MultiPlan spreadsheet to compile lists of rooms and work spaces. We pushed the Mac way beyond the database function, and it proved itself."

Although O'Leary is complimentary of Sammons and Associates, the convention was not without major computer problems. A separate group of consultants hired to handle the convention hall floor terminals walked off the job at the 11th hour, according to O'Leary. "Their legal department advised them there might be problems, so they walked. I wish they had figured that out earlier."

Computer geniuses do not work 9 to 5

How can your company avoid becoming a horror story?

Haberle suggests that companies evaluate their needs, flexibility and the people involved before hiring a consultant. "The company needs to get specifics from the consultant on how these needs will be met." He adds that a consultant should:

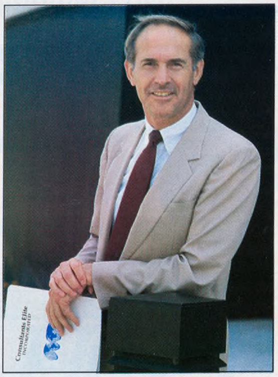
- Talk your language;
- Know the basics of your business;
- Be a focused expert in some range of programs — not a "global expert";
- Spend time listening and asking questions about needs, the people involved and the client's expectations;
- Produce a plan in a reasonable amount of time.
- Be willing to consider off-the-shelf programs that can do the job;
- Have references.

To keep costs within reasonable bounds, managers should be sure to get a contract from consultants before the work begins, including a rough estimate of hours.

Haberle also warns that a good consultant should not be paid to learn. His firm often bills for only 20 to 30 hours out of a 40-hour work week. "Good consultants give 150 percent more time than they are paid for. If a consultant has to become an expert in a program, that's not chargeable time."

Another way to save money, Haberle suggests, is that companies "should not be afraid of the one-man shop or the guy with an answering machine. Computer geniuses don't work 9 to 5 and don't need a full-time secretary. That doesn't mean they can't do the job for you."

A typical one-man shop, In-House Systems of San Francisco, is run by Kim House. He used to do nothing but IBM PC work but is now consulting exclusively in the Mac area. "Size of the company seems to determine Mac use more than being in a particular niche or vertical market," House says. "That means I often work with companies with two to seven employees who want help doing accounting and spreadsheets on Macs."


BARBARA BEIRNE

Charlie Hanna of Consultants Elite requires his consultants to concentrate on their best area.

Despite advertising, direct mail and services like Consultants Elite, most consultants and companies meet through classes and word-of-mouth.

Teaching has helped House pick up clients such as San Francisco General Hospital, where he spent half a day in the trauma unit designing a scheduling template for their Macintosh system, and the University of California Medical Center, which uses the Macintosh in the anatomy, pharmacology and chest research departments.

Crystal Congress, a Mill Valley, Calif., organization, cried "Help!" when its executives began planning the organization's July 1987 convention in Santa Monica, Calif. House was able to set up a registration system for an expected 4,000 visitors and eliminate a full-time employee with only a few hours of work.

According to Laura Bushnell, director of Crystal Congress' public relations, "Although the Mac is easy to use — it is the best tool we have — we never could have solved our problems without a consultant."

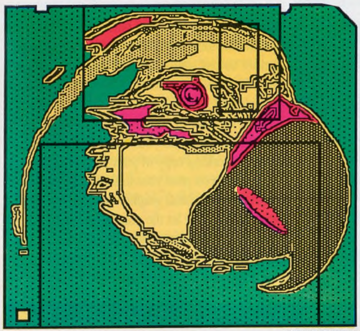
Voices to answer

It is possible for companies to connect with consultants on-line through the CompuServe system. Based in Columbus, Ohio, the nation's largest information service has three centers of consultant activity, according to Jan Bowers, a CompuServe spokeswoman.

Bowers says it is common for consultants to post electronic messages on the bulletin boards in CompuServe's MicroNetwork Apple Users Group and for companies to post queries asking, "Does anyone know a computer consultant who can do such and such in my area?"

CompuServe also has a Computer Consultants Forum with its own electronic bulletin board and a software library for subscribers' use.

Finally, a new service called DPTrain, sponsored by the non-profit group, National Training and Computer Projects, offers source material for trainers and consultants and helps plan on-line training. ■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ISTVAN BANYAI

> "Consultants are weird birds to catch. They are independent contractors and don't make good employees."
>
> **CARL HABERLE**
> **The Mac Studio**

VISIBLE RESULTS

Steve Rosenthal

Picking a style of image representation for the pictorial elements in Macintosh-based desktop publishing may not be as simple as picking a style of type, but it is just as important. As I started to discuss in this column last issue, the two main types of image storage have both strengths and weaknesses.

The familiar bit-mapped image, created by MacPaint and most scanners, as we saw last week, are really just patterns of colored dots (usually black and white on the Mac), and consequently the images have limited resolution and easily lose sharpness if they are resized or distorted.

One alternative is to go with the other type of images — vector-based draw or PICT files. These are the images created by MacDraw, MacPaint, and most CAD (computer-aided design) programs.

Draw-type images are stored as descriptions of the operations needed to create a picture rather than as the resulting bit patterns. For example, instead of listing all the dots making up a box, a draw-type representation lists where to start the box, how big to make it and how wide to make the borders.

Compared with a bit-map or paint-style representation, draw-type images are typically far more compact, at least for objects that can be described as combinations of simple shapes. That also means they can be sent over communications links or networks more quickly, and they even take less time to send to a printer over a busy network. Furthermore, because vector-based images are defined in terms of continuous mathematical operations rather than discrete dots, draw images can be scaled as perfectly for output (providing that is within the precision of the numeric computations used to perform the scaling). You can squeeze a draw image down, zoom it up in size, rotate it through any assortment of angles and put it back where it was to begin with, all without losing any exactness.

Unfortunately, most of us find it substantially harder to create a good image of lifelike objects with a draw program than it would be with a sketchpad or even with a paint program. With a vector-oriented draw program, for example, it is easy to create a rounded box but extremely difficult to create a rotund boxer.

Creating draw-type images also is beyond the power of scanner input devices, except in some very restricted circumstances. Because putting together a draw document implies a knowledge of the logical structure of the image, a scanner that is not equipped with very sophisticated artificial intelligence and pattern recognition can't tell very well which dot on a page belongs to which logical entity.

It is true that with SuperPaint, Adobe Illustrator or Cricket Draw you can create a draw-type image starting from paint or scanned images through a process where the user provides the natural intelligence to translate dots to logical structure. But even with these programs, creating more than a simple illustration is a major undertaking because you need to create so many small vectors to represent lifelike objects of ordinary complexity.

And on the output side, unless you use a plotter or similar vector-oriented device, a draw-type image has to be translated to dot patterns on the paper, which takes both processing power and time.

So what is the answer? Well, for now, my recommendation is to accept that Macintosh-assisted layout, even full-page layout, is still primarily a logical and textual operation. If you are going to use photos or other free-form or continuous tone artwork and you need high-quality output, you're best off combining what the Mac does best with what photography and graphic arts still do better.

Use the Mac to design and create your pages and to put into your camera-ready copy a rough working copy of your final images. But before you print your high-quality work, paste in a traditional graphic-arts photographic image or let the graphic-arts people add the image during the reproduction process. In publishing, including desktop publishing, the goal, after all, is to make sure that what you see is what you want, not merely what you can get. ■

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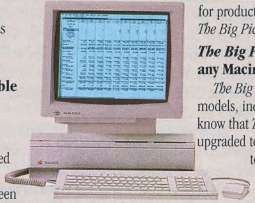

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Kinetics-Excelan merger proposed

BY JIM BEAVER
and CLAIR WHITMER
MacWEEK Staff

SAN JOSE, Calif. — The door to corporate America may have creaked open another inch for the Macintosh with the announcement of a proposed merger between connectivity specialists Excelan Inc. and Kinetics Inc.

Under the proposal, Kinetics, a developer of networking solutions for the Macintosh would become a wholly owned subsidiary of San Jose, Calif.-based Excelan, which specializes in TCP/IP-based connectivity in the PC, DEC and UNIX environments. Kinetics shareholders will exchange all their shares for a total of 475,000 shares of Excelan common stock.

Excelan was trading at about $16 per share at the time of the June 24 announcement.

According to Steven R. Nelson, Kinetics' marketing manager, Kinetics gains the larger reserves of Excelan and its complementary product line.

For its part, Excelan gains a desired foothold in the Macintosh market, according to company spokeswoman Ellen Downing.

The merger, combined with Apple Computer Inc.'s recent acquisition of a minority share of Touch Communications of Scotts Valley, Calif., will give the Macintosh another networking avenue in its approach to the business/workstation environment, according to an Excelan spokesman.

Nelson says he expects commercial support for TCP/IP (transmission control protocol/internet protocol) on the Macintosh to be an early effect of the merger. Some of Kinetics' customers now use TCP/IP on the Macintosh, he says, but they have had to track it down through non-commercial channels.

TCP/IP protocols running over Ethernet were originally developed for the Department of Defense and major universities that required the connectivity of several different computers. It is the most universal network solution for connecting workstations, but software for the Macintosh has not yet been commercially available.

The TCP/IP protocol, when used with Ethernet, allows Macintosh and UNIX computers to communicate. At the USENIX conference in Phoenix, Ariz., in June, Kinetics showed Macintosh and UNIX computers connecting over Ethernet using TCP/IP protocols.

If the technology provides such a commercial solution, Ethernet may come into competition with Centram Systems West Inc. of Berkeley, Calif., which makes the distributed file server program TOPS.

Walnut Creek, Calif.-based Kinetics' earnings for the first three quarters of 1987 are expected to approach $2 million, according to Downing, more than the $676,000 earned for all of 1986.

Excelan's first-quarter net income for fiscal 1987 was $627,000 on earnings of $7.7 million, more than the $343,000 net income on earnings of $4 million for all of 1986. ■

Study shows Macs cut corporate microcomputer costs

BY JIRI WEISS
MacWEEK Staff

STAMFORD, Conn. — Corporate America can decrease microcomputing costs by bringing in Macintoshes, according to a study released last week by The Gartner Group Inc., a consulting firm based here.

Costs can be lowered dramatically even if bringing in the Macs forces a company to support both an IBM and Mac environment, the study concludes. Over five years, the cost of the Mac is 28 percent lower than the IBM PC, a savings of almost $5,600 per user, according to the 76-page report, "Apple Computer and its Macintosh."

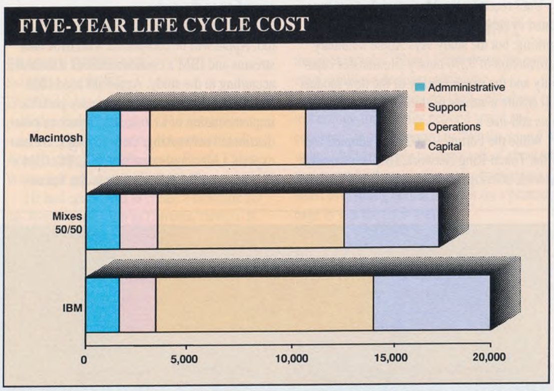
The study was undertaken for The Gartner Group's Fortune 500 clients, according to Patricia Y. Woo, a research analyst with the $25 million, 200-person consulting firm. The study was not financed or endorsed by Apple in any way, she says.

A company with 600 microcomputer users, half IBM and half Macintosh, will spend 13 percent less over five years than an all-IBM shop, saving $1.5 million, according to the study.

The Mac Plus starts with a 38-percent hardware and software price advantage over a comparable configuration of an IBM PC AT with the DOS operating system, spreadsheet and word processor. "New product announcements from IBM and Apple change and add many permutations to this cost comparison, but the net impact is roughly neutral," the report says.

The difference is in the Mac's support and operating costs, the study says. Support costs for the Macintosh are 20 percent less than for the IBM; operating costs are 28 percent lower. Administrative costs are the same for both of the machines.

FIVE-YEAR LIFE CYCLE COST



The comparison assumes a company does not buy any new software over the five-year period, but with new software the savings are even greater. "The lower training time needed on the Mac yields even greater cost savings as users add applications," the study says.

Bringing Macs into an IBM environment initially means a significant increase in training costs, but that is more than compensated by the long-term benefits of ease of use.

IBM's introduction of the OS/2 operating system will fragment IBM's current market of 6 million PCs, eliminating many of the benefits of the IBM PC. The Macintosh still has far fewer software programs than the 20,000 to 30,000 for the IBM PC, but that is of little more than academic interest, the study says. "There are probably over 100 word-processing packages available on the IBM PC, but how many users considered or are even aware of more than [Ashton-Tate's] MultiMate, [MicroPro International's] WordStar, Microsoft Word and WordPerfect?"

Objections raised by IBM PC shops that the Mac's stand-alone capabilities and functionality are inferior to those of the IBM PC and that the cost of supporting an alternative architecture outweigh the benefits are "completely invalid," the study says. The objection that the Mac lacks the communications capabilities to be fully integrated into emerging connectivity standards will prove less of a concern in the near future, the study says.

See COSTS, Page 12

Loren, Berger named Apple vice presidents

BY CLIFF LEHMAN
MacWEEK Staff

CUPERTINO, Calif. — Apple Computer announced the appointment last week of Allen Z. Loren and Charles Berger to new positions.

Loren will be vice president of information systems and technology and will be responsible for all information systems management at Apple. He will report to Delbert W. Yocam, executive vice president and chief operating officer.

"Allen [Loren] has demonstrated throughout his career that the use of systems development and technology can give a company a competitive edge," Yocam says.

Loren, 49, will join Apple in September. He has worked for Cigna Corp. for 16 years and most recently was president of Cigna Systems, the company's information systems group.

He also held several other management positions. He has a bachelor's degree in mathematics from Queens College in New York.

Berger will be vice president of market development. He will be in charge of marketing and sales development in business, education, government and consumer markets.

Berger, 33, will report to Charles Boesenberg, senior vice president and group executive in charge of U.S. sales and marketing.

Boesenberg says Berger's "extensive experience in multiple disciplines will greatly add to our management team."

Berger, who joined Apple in 1982 as treasurer, has held several positions with the company. Most recently he was acting vice president of marketing at Apple.

Before that, as vice president of business development, he helped Apple boost its sales to Fortune 100 companies and established strategic alliances in the telecommunication and information services industry. He also oversaw Apple's value-added reseller program.

As treasurer, Berger introduced new financing programs for Apple resellers and customers, including the Apple credit card program. He also enlarged the company's foreign exchange program and managed investor relations.

Before joining Apple, Berger had been assistant treasurer of ROLM Corp. and president of ROLM Credit Corp.

He has a bachelor's degree in business administration from Bucknell University in Lewisburg. Pa., and a master's degree in business from the University of Santa Clara in Santa Clara, Calif. ■

Programmers' group growing to include many more users

BY JIM BEAVER
MacWEEK Staff

"It finally became a growth curve," says Dave Lingwood, referring to membership in the Apple Programmers and Developers Association. "For awhile it was a straight line, which violated everything known about growth from bean stalks to city-states."

APDA, founded at the Macworld Expo in Boston last August, currently boasts 14,000 members and continues to grow at the rate of about 200 per week.

And Lingwood, APDA's executive director, says he thinks the group is just starting to reach its real audience. The group's makeup is slowly evolving from mainly programmers and developers to a growing number of interested users, who constitute a far larger community.

Sponsored by Apple Computer Inc. and under the parentage of the A.P.P.L.E. Co-op, APDA is the official distribution chan-

See APDA, Page 12

COSTS

Continued from Page 11

Until recently, the Macintosh has not functioned in either data communications or networking, but the study says Apple's January introduction of 3270 binary-file transfer capability and the expandability of the new models will ensure a variety of third-party communications add-ins.

While the Fortune 1,000 have adopted use of the Token-Ring Network, IBM's local-area network offering, as the standard for PC networking, the Ethernet standard, which Apple is pursuing in cooperation with Digital Equipment Corp., will become an alternative, according to the study.

But Apple is pursuing IBM connectivity, too. Apple will be compatible with IBM data streams and IBM's communications standards, according to the study. Apple has used IBM mainframes to develop a proprietary portable implementation of LU6.2, IBM's peer-to-peer distributed networking, the study says. Gartner expects a Mac equivalent of APPC/PC, IBM's PC version of LU6.2, running under Token-Ring Network in 1988.

Because of the Mac's easy-to-use graphic interface in communications packages such as Desktop Express, jointly announced in March by Apple, Dow Jones and MCI Communications, the Macintosh will be an excellent way to give new users, many of whom are computer illiterate, access to information flow with minimal training, the study says.

The Gartner study was based on interviews with clients and in-house expertise, including a quantitative model to determine the life-cycle costs. ■

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Bravo Technologies, Inc.

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APDA

Continued from Page 11

nel for Macintosh technical information and developmental software.

Lingwood says the group was formed because of the concern of the "evangelical" staff at Apple, the liaison to software developers, that technical information was not accessible to a wide enough audience.

"They were concerned that all this stuff was being made available to some people and not to others," he says. "Everything from technical notes to major development systems."

Seven or eight programs within Apple shared responsibility for sending out information and software, Lingwood says. Among those concerned that the system was inefficient were Guy Kawasaki, former Apple evangelist, and Jean-Louis Gasse, Apple senior vice president of research and development.

Apple sponsored the group's formation and was instrumental in alerting developers of its existence. Approximately 1,000 members joined at the Macworld Expo; almost 80 percent were registered or certified Apple developers. The group quickly widened its net to include unregistered developers and programmers and since February, Lingwood says, only 50 percent of new members belong to a development group or company.

But even if the group did not lack for new members in the early days, it did not know precisely what form it was going to take. "It was a chance to organize in an area that was a vacuum," Lingwood says. "The micro world has ACM (Association of Computing Machinery), but what did we have? Darn near nothing."

The question was, what did the Apple/Macintosh world want?

"Were we going to be a programmers' club or a distribution house or a professional association of some sort?" Lingwood says. "There were many ways we could go."

At first, he says, the group was busy "shoving products out the door." But Lingwood says he soon felt a need to move more toward professional services and information sharing.

"Talking shop at the bar is more important in this business than any other," he says.

APDA has recently sponsored seminars and was involved in the MacHack '87 conference in Ann Arbor, Mich., this month. One-quarter of the group's members have requested information on how to become an Apple developer and where they can meet with other developers, according to Lingwood.

Where things will go is hard to tell, Lingwood says. "We'll have to listen to the network itself. This is the most entrepreneurial, individualistic group you'll find anywhere and it's hard to centralize a program."

One direction APDA will go will be toward emphasizing the CAD/CAM software market as Apple pushes the Mac II into the workstation environment. "We'll be there to assist Apple," Lingwood says. "When they begin working with [CAD/CAM firms] we'll be there as a resource to help bring them in gently."

The group's most recent catalog index listed almost 90 programs, upgrades, technical notes and third-party products, many unavailable through the Apple dealership network. ■

ACIUS' Laurent Ribardiere

MARK JOHANN

The vintage ace of ACIUS

BY CLIFF LEHMAN
Special to MacWEEK

CUPERTINO, Calif. — Laurent Ribardiere sits hunched over a Mac II prototype. To his left is an IBM PC, to his right a Mac SE. On the floor are three remote-controlled toy cars — the only clutter in the office.

Except for a few deft flicks of the wrist as he shifts the mouse on its pad and an occasional quick jab at the keyboard, he is motionless. But the screen dances, and under his bushy hair Ribardiere's eyes dance, too, as he flips through an annotated wine map of France.

The unassuming, 23-year-old Frenchman looks like a Northern California beach boy in his jammers, bright shirt, thongs, wild hair and beard. Even by the laid-back standards of Silicon Valley business, he stands out as an eccentric. But make no mistake about the book and its cover. Ribardiere has a corner office in a new building in Cupertino, Calif., where a new software company, ACIUS Inc., has been founded to sell his hot new database manager, 4th Dimension (originally Silver Surfer).

Ribardiere created the program in 1985 for a French company called ACI and brought it to the United States last year. After being picked up and then let go by Apple, Ribardiere formed ACIUS with Maryelene Delbourg-Delphis, his former boss at ACI in France, and ex-Apple VIP Guy Kawasaki, who thought enough of the program to leave Apple for it.

Ribardiere's unmistakable love for computers shows very clearly as he remembers the experience that led him to invent 4th Dimension: four years of drudgery cranking out applications in Pascal for a software firm in Paris.

"I was writing vertical applications," he says, rolling his eyes and throwing up his hands. "Most of the time it was really boring because you have no tools. It is then that I got the idea for a program like 4th Dimension."

Two months later, driven by desperation and working in his spare time, he had written a file manager called ABC Base. Royalties from it bought him the time to write 4th Dimension.

Like many of the young hackers of his generation, Ribardiere developed an early fascination with computers. He grew up in Paris, and at the age of 16 he volunteered to help his math professor on a computer project. It was his first experience with computers, but he was soon hooked. His parents saw how devoted he was to the machines and bought him an Apple II. After that, it was only a matter of time.

At 17, Ribardiere started working part time as a programmer while attending school. When Apple's Lisa came out, he quit school to work as a full-time computer programmer.

Ribardiere developed 4th Dimension in 1985 with two goals in mind: to create a powerful, fast database manager and to make it one that people could use without having to learn an underlying language.

There is a Gallic glint in his eye and satisfaction on his face as he shows off a database program he has written about the wines of France. Maps of France's wine-growing regions appear on the screen. Subregions come up, then lists of each area's wines, their relative quality and the amount produced each year.

"This took only two weeks to write, but it is taking more than three months to enter the data," he says, smiling and coming to an area where the wine list is empty.

For Ribardiere, this proves he has reached one of the goals he had for 4th Dimension: to make programming the database faster than working in languages like Pascal or dBaseIII. According to Ribardiere, an application that might take 10 months to code in Pascal or Control C, and three months in dBase, can be written in two to three weeks in 4th Dimension.

"What I like about programming is the result," he says, sitting back, hands folded over his knee, proud but not arrogant. "It's fun to start from nothing, to create something that moves on the screen, like creating a robot. That's exciting."

He enjoys working with his program and thinking of the tools it will provide people. He also loves hiking, swimming and exploring, and he wishes he had more time to explore the San Francisco Bay Area. Still, whatever his other interests, one has only to see the excitement in his eyes at the mention of future projects to know where Ribardiere will be spending most of his time. ■

Hawaiian publisher's maiden voyage

Book on whaling makes a splash in desktop publishing

BY MARY FRIEDLAND
Special to MacWEEK

HONOLULU — As recently as two years ago, publisher Bob Goodman called himself "a computerphobe." Then he bought his "Swiss Army computer": a Macintosh Plus, a LaserWriter and desktop-publishing software.

He had contracted to create a brochure for the Whaling Museum in Lahaina, Hawaii. It was, it seemed, a simple enough project for testing the waters of desktop publishing. Little did he know that the brochure would blossom into a prize-winning book that would change the nature of publishing.

Goodman, 53, wanted to maximize his involvement in the bookmaking process, a quest that had already earned him two gold medals from the New York Art Directors' Club for a previous book as well as the honor of having yet another book about the Hawaiian Islands chosen as a Presidential Gift of State.

Within 10 months of acquiring the Mac, the publisher and the computer sired "Whale Song," an art book on 19th-century whaling in Hawaii, and Goodman developed a rapturous attachment to his new publishing tool. Meanwhile, Apple, Aldus Corp. and Adobe Systems Inc., the companies that supplied the hardware and software tools of Goodman's craft, were so impressed with what he had wrought that they began distributing "Whale Song" themselves — to plug their own products.

"I like intimacy," Goodman says. "I want to be deeply involved in every crevice of the craft of assembling a book."

Predictably, Goodman fell in love with his Mac, and one thing led to another. "Working with PageMaker was magic," Goodman says. "The ease of running off thumbnails (page sketches), scanned images and different layout plans let us see things in many different ways." To get the 130-page "Whale Song" just right, Goodman took 1,300 proof pages. "Why not?" he asks. "Thirty seconds and 3 cents for materials, and you have a camera-ready page."

A very nice, and unexpected, surprise came when Goodman laid the text output from a 300-dpi LaserWriter alongside proof pages from his typesetter's 2,500-dpi Linotronic 300. According to Goodman, the LaserWriter output looked so good he canceled the typesetting and printed directly from LaserWriter output, thus introducing the world's first desktop-published, coffee-table book.

Goodman stepped into publishing from a lifelong career in photography. "I was the only Jewish kid in a Catholic neighborhood," he recalls. "The only way I could participate in the life around me was with a camera."

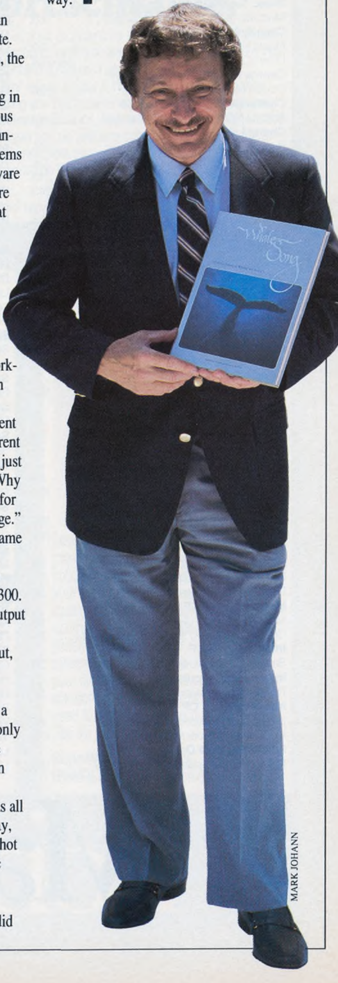
Subsequently, Goodman lugged cameras all over the globe, selling photos to pay his way, eventually anchoring in Hawaii. There he shot volcanic eruptions for National Geographic magazine until he switched to books.

For his first two books, "The Australians" and "The Hawaiians," Goodman did the photography. Then he laid down the camera to embrace desktop publishing.

Goodman cherishes desktop-publishing technology for benefits beyond speed and economy. In an afterword to "Whale Song," he writes, "What people have not talked about (in desktop publishing) is the magic that occurs when everything comes together on a printed page in just the right way."

Currently, Goodman is gearing up for a second printing of "Whale Song," this time with a new VT600 (600-dpi) Varityper laser printer. "I'll stay true to desktop-publishing technology but go with the latest improvements," he says.

He will launch the second-generation "Whale Song" in August at the Macworld Expo in Boston. "I would rather not be in publishing at all," he says, "than do it any other way." ■



MARK JOHANN

Hardware and software for the business Mac.

SOFTWARE

NCP denotes not copy-protected.
CP denotes copy-protected.

Aegis Development ... NCP	
Doug Clapp's Word Tools	$42.
Affinity Microsystems ... NCP	
Tempo *(power user's macro utility)*	55.
ALSoft ... NCP	
DiskExpress *(maximize disk performance)*	27.
Altsys ... NCP	
FONTastic Plus *(advanced font editor)*	49.
Fontographer *(Laserwriter font editor)*	245.
Ann Arbor ... NCP	
FullPaint *(advanced Paint program)*	53.
Berkeley System Design ... NCP	
Stepping Out *(requires 512k)*	59.
Blyth ... CP	
Omnis 3 Plus *(multi-user available)*	call
Borland International ... NCP	
Sidekick 2.0	59.
Reflex *(information management analysis)*	59.
Turbo Pascal *(HFS compatible)*	59.
BrainPower ... NCP	
Graphidex *(DA graphics organizer)*	69.
Designscope *(electronic circuit design)*	129.
StatView 512+ *(req. external drive, 512k)*	179.
Bravo Technologies ... NCP	
MacCalc *(easy to use spreadsheet)*	85.
CasadyWare ... NCP	
Fluent Fonts *(two-disk set)*	29.
Fluent Laser Fonts *(Vols. 1-15)*	*each* 48.
Central Point Software ... NCP	
Copy II Mac *(includes MacTools)*	20.
Challenger Software ... NCP	
Mac3D *(3D graphics, CAD features)*	119.
Chang Labs ... CP	
Rags to Riches Ledger or Payables	125.
Rags to Riches Receivables *(req. 512k)*	125.
Inventory Control	243.
Professional Billing	243.
Cortland ... CP	
TopDesk *(7 new desk accessories)*	34.
Cricket Software ... NCP	
Statworks *(statistical package)*	77.
Cricket Graph *(multiple windows)*	127.
Cricket Draw *(advanced draw capabilities)*	177.
Data Tailor ... NCP	
Trapeze *(spreadsheet, reqs. 512k)*	173.
DataViz ... NCP	
MacLink Plus *(transfer Mac/IBM data)*	159.
Digital, etc. ... NCP	
Turbo Maccountant *(GL,AP,AR,Payroll)*	262.
Dow Jones ... CP	
Market Manager Plus 1.5	159.
Dubl-Click Software ... NCP	
Calculator Construction Set	39.
World-Class Fonts! *(both Volumes)*	49.
WetPaint Clip Art *(both Volumes)*	49.
Enabling Technologies ... NCP	
Easy3D *(create solid 3D objects)*	89.
Pro 3D *(3D shaded modeling)*	199.
Forethought ... NCP	
FileMaker Plus *(feature-packed database)*	159.
PowerPoint *(professional presentations)*	249.
FWB Software ... NCP	
Hard Disk Backup *(protect hard disk info)*	38.
Hard Disk Partition *(speeds up hard disk)*	38.
Hard Disk Util *(program backup)*	56.
Ideaform ... NCP	
MacLabeler *(print disk labels)*	29.
DiskQuick *(catalog floppies & hard drives)*	29.
Imagine ... NCP	
Smart Alarms *(DA reminder system)*	38.
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Infosphere ... CP	
LaserServe *(network software)*	65.
MacServe *(network software)*	175.
Innovative Data Design ... NCP	
MacDraft *(new updated version, 512k)*	159.
LaserWare ... CP	
LaserWorks *(requires 512k, Laserwriter)*	$229.
LaserPaint *(requires Mac Plus, Laserwriter)*	375.
Legisoft/Nolo Press ... NCP	
WillWriter 2.0 *(prepare your own will)*	31.
Letraset ... NCP	
Ready,Set,Go!3	249.
Linguist's Software ... NCP	
Tech *(1000 different symbols)*	59.
Foreign language fonts	call
Living Videotext ... NCP	
More *(outlines, windows, & tree charts)*	158.
Lundeen & Associates ... NCP	
WorksPlus Spell	39.
Micro Analyst ... NCP	
Mac Zap *(recover crashed hard disks)*	36.
Microsoft	
Basic Interpreter 3.0 *(NCP)*	64.
Chart 1.02 *(42 chart styles, CP)*	72.
Multiplan 1.1 *(63 col. by 255 rows, CP)*	105.
File 1.05 *(flexible data manager, NCP)*	111.
Basic Compiler 1.0 *(NCP)*	119.
Fortran 2.2 *(compiler, NCP)*	169.
Works 1.0 *(integrated tool, NCP)*	189.
Excel 1.04 *(power spreadsheet, NCP)*	224.
Word 3.0 *(word processor, NCP)*	239.
Mindscape ... CP	
GraphicWorks 1.1 *(newsletters, posters)*	48.
Monogram ... NCP	
Dollars & Sense *(home, small business)*	81.
Odesta ... NCP	
Double Helix *(relational, custom menus)*	275.
Multi-User Helix *(requires 512k)*	439.
OWL International ... NCP	
Guide *(hypertext, free-form info)*	79.
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Palantir ... NCP	
inTalk *(communication to emulation)*	99.
PBI Software ... NCP	
HFS Locater *(DA organizer for HFS)*	26.
HD Backup *(supports MFS, HFS)*	29.
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HFS Backup	34.
ProVUE Development ... NCP	
OverVUE 2.0 *(power-packed database)*	149.
Satori ... NCP	
BulkMailer *(mailing lists)*	74.
BulkMailer Plus *(up to 90,000 names)*	225.
Legal Billing *(attorneys to accountants)*	385.
Legal Billing II *(full trust accounting)*	575.
Project Billing *(architects to engineers)*	445.
Silicon Beach Software ... NCP	
Silicon Press *(printer utility, 512k)*	41.
SuperPaint *(advanced graphics program)*	54.
Software Discoveries ... NCP	
Record Holder Plus *(data manager)*	41.
Software Ventures ... NCP	
Microphone 1.1 *(includes Glue™)*	119.
Solutions, Inc. ... NCP	
SmartScrap & The Clipper	41.
Glue *(creates "print to disk" capability)*	41.
State of the Art ... CP	
Electric Checkbook *(print checks)*	28.
SuperMac Technology ... NCP	
SuperSpool	39.
Diskfit *(backup & restore utility)*	49.
SuperLaserSpool	99.
Multi-User SuperLaserSpool	259.
Survivor Software ... NCP	
MacMoney *(financial planner)*	42.
Symmetry ... NCP	
Acta 1.2 *(outline/writing desk accessory)*	38.
PictureBase *(clip art manager, 512k)*	44.
T/Maker ... NCP	
ClickArt Personal Graphics, Effects, Publications, Letters Vol. 1 or 2, Holidays, Business Image	*each* 28.
Bombay, Plymouth, or Seville Laser font	46.
Write Now *(word processor)*	104.
Think Technologies ... NCP	
Laserspeed *(Laserwriter utility)*	67.
Lightspeed Pascal *(includes debugger)*	87.
Lightspeed C *(top-rated C Compiler)*	$127.
InBox Starter Kit *(CP)*	235.
InBox Personal Connection *(Mac & PC)*	call
TML Systems ... NCP	
TML Source Code Library	58.
TML Pascal *(compiler, req. 512k)*	68.
TrueBasic ... NCP	
True BASIC *(fast, flexible & portable)*	59.
Algebra 1 or II, Pre-calculus, Trigonometry, 3D Graphics, Discrete Math, Probability, Chippendale utilities & Calculus	*each* 35.
TrueSTAT *(statistics)*	58.
Runtime *(create stand-alone applications)*	59.
William & Macias ... NCP	
myDiskLabeler *(design & print labels)*	24.
myDiskLabeler w/Color *(req. Imagewriter II)*	33.
myDiskLabeler w/Laserwriter option	35.
Working Software ... CP	
(Formerly Greene, Johnson)	
Spellswell *(spelling checker)*	45.

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AST Research ... 2 years	
AST Turboscan *(300 dpi scanner)*	1479.
AST 2000 *(20 MB, 20 MB tape)*	1479.
AST 4000 *(74 MB, 60 MB tape)*	3895.
Curtis Manufacturing ... lifetime	
Diamond *(6 outlets)*	29.
Emerald *(6 outlets; 6 ft cord)*	36.
Sapphire *(3 outlets; EMI/RFI filtered)*	47.
Ruby *(6 outlets; EMI/RFI filtered; 6 ft cord)*	55.
Dove Computer ... 90 days	
MacSnap Memory Upgrades	call
Ergotron ... 1 year	
Mouse Cleaner 360°	15.
MacTilt or MacTilt SE	74.
MacBuffer 512k	329.
MacBuffer 1024k	429.
Farallon Computing ... 1 year	
PhoneNET PLUS *(DB-9 or DIN-8)*	39.
Hayes ... 2 years	
Smartcom II *(communications software)*	88.
Smartmodem 1200	299.
Smartmodem 2400	449.
InterBridge *(connect Appletalk networks)*	599.
IOMEGA ... 90 days	
Bernoulli Box *(dual 20 MB w/SCSI)*	1879.
Bernoulli Box *(dual 10 MB, Appletalk)*	call
Kensington ... 1 year	
Appletalk Cable Clips or Connectors	*each* 1.
Mouse Cleaning Kit w/Mouse Pocket	17.
Disk Drive Cleaning Kit	20.
Tilt/Swivel	22.
Universal Copy Stand	24.
Polarizing Filter or Surge Suppressor	34.
System Saver Mac or Control Center	64.
A-B Box *(for the Mac Plus)*	64.
Turbo Mouse	85.
Koala Technologies ... 90 days	
MacVision *(digitizer)*	175.
Migent ... 1 year	
Pocket Modem *(ext. 1200 baud)*	169.
Mirror Technologies ... 1 year	
Magnum 800 External Drive	209.
Magnum 20 Tape Backup	899.
MagNet 40/40 *(40MB, 40MB tape)*	2395.
MagNet 20x *(w/cable)*	779.
MagNet 30x *(w/cable)*	949.
MagNet 40x *(w/cable)*	1299.
MagNet 85x *(w/40MB tape)*	3995.
Network Specialties ... 1 year	
Stretch Screen *(19" monitor)*	1579.
Personal Computer Peripherals ... 1 year	
MacBottom Hard Drive 21MB *(SCSI)*	$865.
MacBottom Hard Drive 45MB *(SCSI)*	1295.
Summagraphics ... 90 days	
MacTablet 12" x 12" *(sketching)*	379.
Systems Control ... 2 years	
MacGard *(surge protection)*	55.
Thunderware ... 90 days	
ThunderScan 4.0 w/Power Port	199.
Western Automation ... 1 year	
DASCH RAMdisk 2000k	459.

DISKS

Double-sided Diskettes

Sony 3½" Disks *(box of 10)*	21.
MAXELL 3½" Disks *(box of 10)*	21.
Fuji 3½" Disks *(box of 10)*	21.
Verbatim 3½" Disks *(box of 10)*	23.
3M 3½" Disks *(box of 10)*	23.

INFORMATION SERVICES

Compuserve	
Compuserve Information Service	24.
Dow Jones	
Dow Jones News/Retrieval Membership Kit	24.

ACCESSORIES

I/O Design	
Imageware II *(Imagewriter II carry case)*	49.
Macinware Plus *(Mac Plus carry case)*	69.
Macinware SE *(Mac SE carry case)*	89.
Kalmar Designs	
Teakwood Roll-top Case *(holds 45 disks)*	14.
Teakwood Roll-top Case *(holds 90 disks)*	21.
Moustrak	
Moustrak Pad *(standard 7" x 9")*	8.
Moustrak Pad *(large 9" x 11")*	9.
Sensible Softworks	
High Quality "MacAttire" dust covers	7-17.

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- No sales tax.
- All U.S. shipments insured; no additional charge.
- APO/FPO orders usually shipped 1st Class Mail.
- Allow 1 week for personal and company checks to clear.
- UPS Next-Day-Air available.
- COD max. $1000. Cash or certified check.
- 120 day limited warranty on all products.*
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Max Out

Corporate image.

Way back when, in the peaceful little village of Marlow, NH (pop. 552), Lucian and Lucius Tinker laid the foundation for our Macintosh mail order megalopoly. Sure, they thought a mouse was something you set traps for, and chips came from buffaloes, but when it came to running a business, Lucian and Lucius knew the secrets. Like taking the time to answer strangers' questions. And dealing fairly with every customer. And always delivering on time.

At MacConnection, we do business the same way. We are the leading mail order supplier of Macintosh add-ons and software. Our sales people know what works, how it works, and how to make it work better. We offer competitive prices combined with complete product support. But, most of all, we have a reputation for giving the kind of personal service that many people thought went out of style with starched collars. So, next time you need to perk your Mac up a little, give us a call.

The True, the whole True...

From the people who gave you BASIC to begin with, comes *True BASIC*. It's the flexible structured programming version of BASIC with a full range of control libraries. And, if you've been lusting after this little language, now is the time to take the plunge. Because we've got two, that's two, two True deals in one. For starters, we've cut a monster chunk out of the price of the basic package. And, if you buy *True BASIC*, we'll sell you either or both of two of the most popular optional libraries, *Calculus* and *3D Graphics* for only $25. These programs are not copy-protected.

True BASIC **$59**

Calculus (REG. $35) . . . . *with purchase of True BASIC* **$25**

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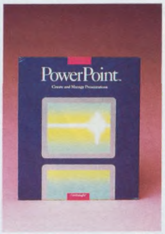
Be presentable.



There are lots of great programs for creating graphs, time charts, cash flow projections, written strategies, etc. but turning them into effective presentations can be a bear.

PowerPoint makes it easy. It integrates smoothly with other programs, letting you pull together all the text and graphics you need for overhead projections. And, it has powerful design capabilities built-in so you end up with one coherent collection of charts and copy. Just print them on acetate or turn them into slides and your next presentation will be eminently presentable.

Forethought
PowerPoint (not copy-protected) **$249**

Pass the graphics!

With *Glue*, you can easily share information with anyone *even if they don't have the same software you used to create the document.* Just "print to disk" with *Glue*. Share the file via a network, file server, or diskette. Then the other person can use *Glue* to read the print file, without even knowing how you created it. No more duplicating software libraries. No more learning whole programs just to read someone else's files.

Solutions, Inc.
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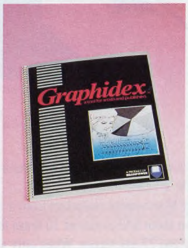

Wouldn't it be nice to have all your favorite format graphics in one convenient location, instead of pawing through all those disks trying to remember where you left them? Well, get *Graphidex*. You can put up to 10,000 MacPaint or MacDraw pictures into the *Graphidex* index. Then you can retrieve, preview, edit, and paste them whenever and wherever you like, without touching the originals.

BrainPower
Graphidex (not copy-protected) **$69**

Micro bookkeeper.

If you're running a small or mid-size business, turn the books over to *Turbo Maccountant.* It combines general ledger, accounts receivable, accounts payable, invoicing, and payroll into one easy-to-use, fully-integrated program. You can keep all ledgers open simultaneously, moving back and forth between them as often as you like. The program is also compatible with most major business programs, so you can transfer files directly to your spreadsheet or word processor.

Digital, Etc.
Turbo Maccountant (not copy-protected) **$262**

Back Up!

DiskFit is a clever little backup/disk optimizing utility. It greatly simplifies the process of backing up your data from your hard disk to floppies or Bernoulli cartridges. And it also does some serious optimizing. Instead of making a completely new copy of every changed file, it makes sure your backup only grows as your files grow. *DiskFit* also stores files in standard Macintosh format, and can be used to optimize storage on your hard disk for faster access.

SuperMac Technology
DiskFit (not copy-protected) **$49**

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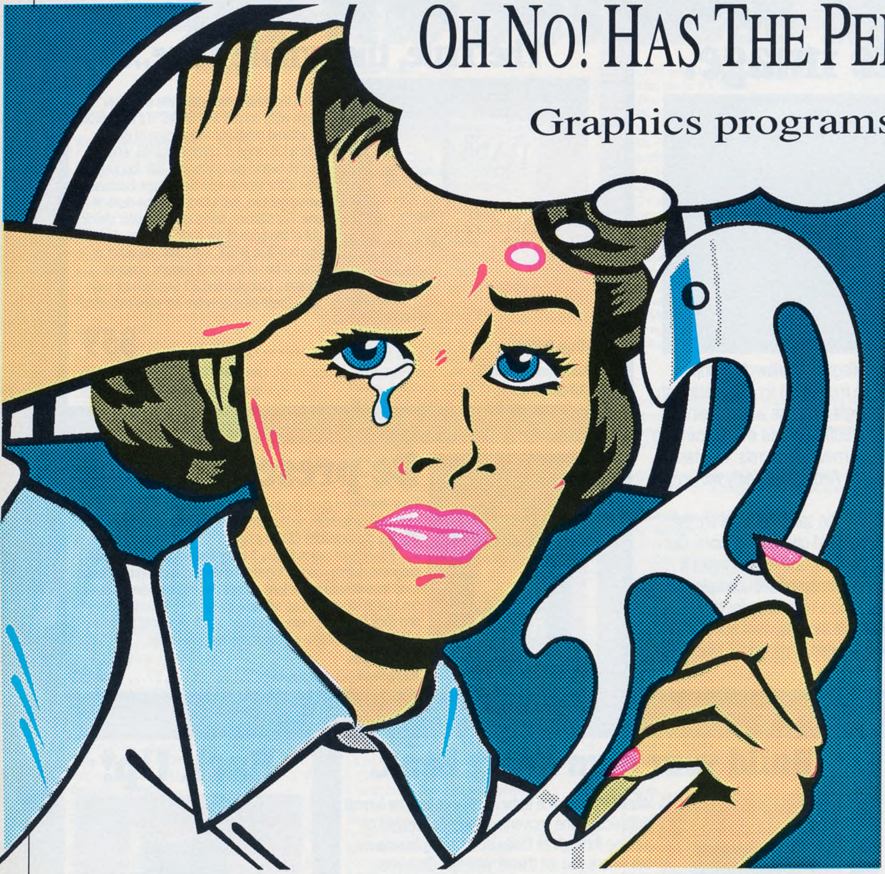
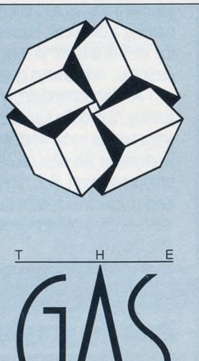
OH NO! HAS THE PENCIL BECOME

Graphics programs let artists create



Logos are important in visual communications. Successful logos often blend letters and geometrical symbols. Graphics programs are ideal for this because they offer different typefaces and the ability to handle lines and objects precisely.



These logos were created by Jack Davis, staff artist for VERBUM, a computer journal in San Diego. He used MacDraw to generate the drawings and then, to ensure crisp lines and borders, printed them on a Linotronic 300 typesetter.

From bit-mapped designs assembled in MacPaint and printed out on an ImageWriter to PostScript-based art created in programs like Illustrator or Cricket Draw and printed on the LaserWriter or the Linotronic, Macintosh graphics have come a long way in three years.

Back in 1984 there was little choice. MacPaint was the only graphics software available for the Mac. Today Mac owners can select from a smorgasbord of tantalizing programs designed to meet a variety of specialized graphic needs and range in price from about $50 to almost 10 times that.

Flexible, free and, frankly, fun, MacPaint showed off the graphic capabilities of the Mac's 68000 processor and 72-dpi screen. When only a handful of productivity programs were available for the Mac, MacPaint helped it establish at least a modest market niche. It spawned a whole new industry — the production of computer clip art — that has made dozens of disks of diverse and useful images available to designers and desktop publishers. To this day MacPaint remains a favorite among amateur artists, and its format provides a *lingua franca* for the exchange of bit-mapped art among other programs.

But MacPaint, restricted to the resolution of the screen, was not designed to take advantage of the capabilities of the 300-dpi LaserWriter and the even higher-resolution devices required to produce professional-quality graphics. MacDraw, another program from Apple, introduced "object-oriented" drawing, with multiple layers and mathematically defined elements that appear in hard copy at the best resolution the printer can achieve.

Since then new programs and protocols have continued to open new options for Macintosh artists. Programs like FullPaint and ClickArt Effects brought bit-mapped software to a higher level, and now SuperPaint offers an easy way to combine painting and drawing. MacDraft added some options lacking in current versions of MacDraw, while Cricket Draw put PostScript to work to provide a variety of flashy effects the Apple program cannot yet match.

A new standard called TIFF (Tag Image File Format) promises to bring a degree of uniformity to images produced by digitizing scanner devices, and Adobe's Illustrator program makes it possible for professionals to turn such scans into PostScript art of impressive quality.

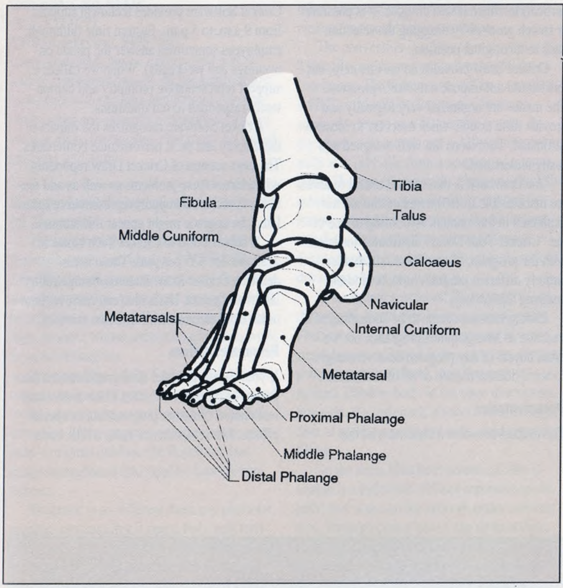
A new high-end competitor called LaserPaint tries to combine a variety of approaches into what is billed as an "integrated graphics workshop." And EPSF— the new Encapsulated PostScript Format supported by Cricket Draw, Illustrator and LaserPaint — provides the foundations of a standard format for PostScript art and lets such images be imported into the new generation of desktop-publishing programs.

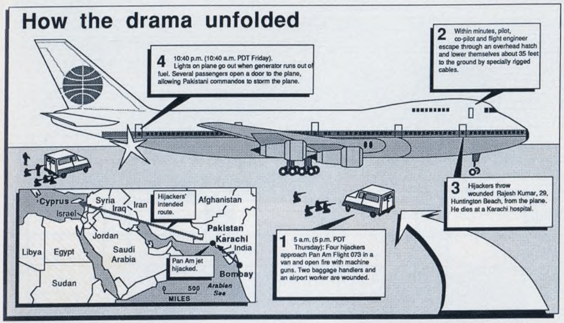
The upshot of these diverse developments is a degree of confusion but also a wealth of new possibilities in the world of Macintosh graphics. This week MacWEEK surveys some of the options — in reviews of four recent programs in a special folio of Mac art (Pages 18-22).

OBSOLETE?

special effects without using pen and ink

Infographics is another growing field in which computer-generated graphics help newspaper and magazine artists create maps and charts on the spot. Once created, the files can be stored, updated and shared via modem with other publications. A major advantage of using a computer to generate art is that it saves time, which at a fast-paced, deadline-oriented publication could make the difference between just getting the story or getting the "scoop."





1 5 a.m. (5 p.m. PDT Thursday): Four hijackers approach Pan Am Flight 073 in a van and open fire with machine guns. Two baggage handlers and an airport worker are wounded.

2 Within minutes, pilot, co-pilot and flight engineer escape through an overhead hatch and lower themselves about 35 feet to the ground by specially rigged cables.

3 Hijackers throw wounded Rajesh Kumar, 29, Huntington Beach, from the plane. He dies at a Karachi hospital.

4 10:40 p.m. (10:40 a.m. PDT Friday). Lights on plane go out when generator runs out of fuel. Several passengers open a door to the plane, allowing Pakistani commandos to storm the plane.

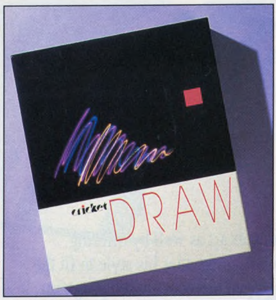
DAN CLIFFORD/Knight-Ridder Graphics Network

The drawing of the foot was created with LaserWare Inc.'s LaserPaint by Hartley Healey, LaserWare's art director. The newsgraphic depicting the hijacking of Pan Am Flight 073 on Sept. 5, 1986 , in Pakistan was done by Dan Clifford of the Miami (Fla.) Herald and distributed over the Knight-Ridder Graphics Network.

Illustrations can benefit from computer art as well by offering the artist new styles and possibilities. The artist can alter his style to fit the particular environment provided by bit-mapped or vector-based programs. Spectacular effects, such as fountains, shadows, starbursts and text-bending, can be used in developing the design. Images and photographs can be scanned directly into the computer to serve as templates for tracing or to be used with line art.

The illustration of the cricket, above, was generated on Cricket Draw by Laslo Vespremi, MacWEEK art director. It demonstrates the program's unique capabilities to create fountains and shadows, to control dot size and to change the dots into lines of various widths.

The picture of the nurse, far left, was created by Adobe Systems Inc. using Illustrator, the firm's own graphics program, as a house promotional ad. The drawing of the Lay's Potato Chips bag, right, was generated by KWIKEE Multi-Ad Services in Irvine, Calif., using Illustrator.



CAMILLE GOOD

Cricket Draw 1.01

Cricket Software ☆ ☆ ☆ ☆
3508 Market St., Suite 206
Philadelphia, Pa. 19104.
(215) 387-7955
$167 (street price); **$295** (list price)
Not copy-protected. Combines basic object-oriented drawing tools and a variety of special effects. Documents are limited to one page, and printing and display can be slow.

Cricket Draw is an object-oriented graphics program that offers spectacular special effects not available in rival software packages. The extra features do not come without a price, though. If too many special effects are employed, the program's speed is penalized.

Features

Cricket Draw can match almost anything that can be done with MacDraw, and it rectifies many of the Apple program's most annoying limitations. Text, for example, can contain multiple fonts, sizes and styles. Objects can be rotated and tilted to any angle.

Cricket Draw provides only object-oriented graphics. There are no spray cans, paint brushes or patterns, but selections from painted (bit-mapped) documents can be inserted by cutting and pasting via the Clipboard. Images saved in MacDraw's native format, as well as in the common PICT form, can be opened directly into Cricket Draw.

The program does not support patterns, but it almost makes up for this deficiency with its treatment of gray levels. The user can assign a gray level between zero percent and 100 percent to the border or interior of any object, even bit-mapped objects imported from a paint program. Cricket Draw makes the printer approximate the gray level as closely as it can.

Although color PostScript printers are not available yet, Cricket Draw is ready for them. Objects can be drawn in one or two colors (border and interior). On a color-equipped Mac II, the program displays objects in full color.

Cricket Draw lets users draw lines and borders of any width from 0.05 to 99 pixels. Ten dotted or dashed line styles are available. Arrows can be placed at either or both ends of any line, arc or other open curve. The program will even "bind" a text object to a curve so that when printed, the bound text snakes through the document along the curve's path. This feature is one of Cricket Draw's most spectacular features, but use it sparingly: Bound text is slow to display or print.

The illustration below, Cricket's sample document, demonstrates Cricket Draw's two other special features: the shadow and fountain effects. A shadow is a projection of an object, painted in a blend of gray shades. Users can create a shadow for any object, specifying the gray levels to apply from one edge of the shadow to the other.

The fountain lets the user place a smooth gradation of gray tones within a closed area. Fountains can replace a solid gray fill with a blend of grays. When a fountain is requested, Cricket Draw asks for the starting and ending gray levels. Then the user specifies the direction of the blend by dragging a brush-shaped cursor across the object.

PostScript practitioners will love this feature: Cricket Draw displays the PostScript translation of a document and even allows it to be edited. The results of modifications to the PostScript code are not, however, displayed on screen. They can be seen only when the document is printed on the LaserWriter.

MacDraw users considering upgrading to the newer program should be aware of one significant drawback: Cricket Draw is limited to single-page documents. Those who need to generate massive charts or technical drawings will have to stick with MacDraw or try another of the new object-oriented programs.

Performance

As long as users avoid its most sophisticated features, Cricket Draw's speed is adequate. Performance can be improved by telling the program not to display time-consuming features like text and bit-mapped objects or fountains and shadows on screen. It is not possible to speed up bound text, a very slow feature.

The worst bottleneck is the sloth with which Cricket Draw prints fountains, shadows and bound text. For example, the illustration that displays these fancy features appears on screen in 10 seconds, but it requires 18 minutes to print on the LaserWriter (using the latest LaserWriter driver, Version 4.0). On the bright side, the Macintosh completes the printing task rapidly; only the LaserWriter is tied up during this interval.

Some Cricket Draw documents may not print properly on Linotronic typesetting machines. One typesetting service says it had problems with a document that used large expanses of layered radial fountains. The document printed in 15 minutes on a LaserWriter, but it took nearly three hours on a Linotronic 100 — and only half the document printed.

Although Cricket Draw is designed primarily for PostScript printers, it also can print on an ImageWriter. Fancy features, however, can slow an ImageWriter even more than a LaserWriter. It took 45 minutes to print one sample document on an ImageWriter I, and the results were not worth the wait.

In general, printing speed is adequate for simple documents that do not contain bound text, fountains or shadows.

Ease of use

Cricket Draw's user interface is consistent and well-designed. Dialog boxes contain helpful graphics whenever appropriate. Whenever a graphic element is double-clicked, the program displays a dialog box that lets the user modify characteristics such as border width, gray levels and smoothing. Clicking on a rounded rectangle, for example, brings up a dialog box from which the radii of the corner arcs can be fine-tuned.

Most of the Command-key shortcuts are logically chosen. Unfortunately, the shortcuts that allow zooming in or out on a document are the same as those used by Switcher (Command-[and Command-]). Although the zoom feature can be selected from the menu, Cricket's choice of this key combination creates an unnecessary inconvenience for Switcher users.

Like most graphics applications, Cricket Draw provides a method for constraining the movement of a selection to vertical or horizontal, but Cricket's technique feels better than most. It works as if the selection were locked into a cruciform pair of grooves. When a selection is moved away from its original position, it is constrained to the groove (horizontal or vertical) in which it was dragged. It is possible to switch grooves by dragging the selection back to its original position.

Cricket Draw provides no on-line help, but this should not impede a novice's progress. The menus are organized very logically and provide little trouble when users try to locate a command. Tool icons are well-designed and easily understood.

One drawback is that several useful features are inaccessible from the menus and are not explained in the manual. According to one of the "Cricket Tech Notes" distributed looseleaf with the program, "Some have said that an entirely different program lurks behind the amazing Option key."

Hiding features seems to be something of a tradition in Mac graphics programs, but we think buyers of any program deserve straightforward documentation of all of its features.

Documentation

The manual provides a clear tutorial that demonstrates many of Cricket Draw's features. It leads users through the step-by-step construction of an impressive illustration. Illustrations are plentiful and well thought out.

There is a generous section of the manual for those who enjoy programming the LaserWriter in PostScript. An appendix documents the PostScript routines supplied by Cricket Software and used heavily by Cricket Draw.

Unfortunately the manual does not include the most common built-in PostScript routines, but they are documented on-line, albeit slowly. Likewise, the on-line PostScript helper should include the special Cricket routines.

Cricket Draw comes with 18 supplementary pages of errata and tips, indicating the manual was printed before the program was debugged. The lack of a unified index for the inserts and manual can be very frustrating.

Support

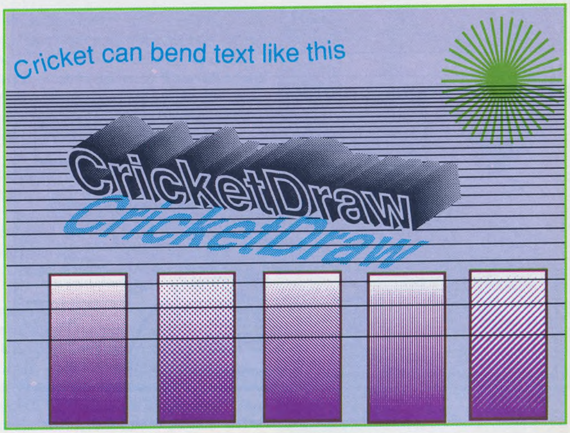
Cricket Software provides technical support from 9 a.m. to 5 p.m., Eastern time (although employees sometimes answer the phone on evenings and weekends). When we called, a support representative promptly and competently responded to our questions.

Cricket Software recognizes the impact of the display and print performance bottlenecks. The next version of Cricket Draw reportedly will address these problems as well as add features. A technical support representative speculated the upgrade might appear this summer.

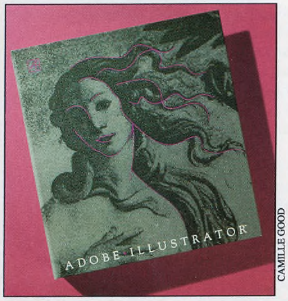
A subscription to Cricket Tech Notes is available for $25 per year. These notes describe Cricket Draw features, compatibility issues and errata. Users also can retrieve these notes from electronic information services.

Recommendations

If you want to produce slick graphics on a laser printer or typesetter, Cricket Draw is an excellent choice. No other program has its special effects. Just remember to leave a little extra


Cricket can bend text like this
CricketDraw
CricketDraw

This sample document from Cricket Software displays Cricket Draw's impressive special effects.



CAMILLE GOOD

Adobe Illustrator

Adobe Systems Inc. ☆ ☆ ☆
1870 Embarcadero Road
Palo Alto, Calif. 94303
(415) 852-0271
$370 (street price); **$495** (list)

Copy-protected, but an unprotected disk is sent to registered owners. In the hands of professionals with the time and patience to master its often non-intuitive procedures, Illustrator can make spectacular PostScript art out of sketches and scans.

Illustrator is not the kind of software that made the Macintosh.

The screen output it generates is far from the much-publicized ideal of WYSIWYG. Learning the program requires many hours of study and practice. Even then, the logic behind its procedures remains obscure — except, perhaps, to those whose artistic imaginations work in terms of tangents.

Developed by Adobe Systems Inc., Illustrator was designed to give commercial artists and technical designers a tool that would take full advantage of the graphics potential of the company's original product, the PostScript language incorporated into Apple's LaserWriter printers.

Illustrator is so different from any previous graphics program that it opens truly new territory, and its real uses will become clear only as people master it and put it to work. But it is already clear that Adobe has succeeded artistically as well as commercially. As the accompanying reproductions show, professionals working with Illustrator are producing stunning graphics in a variety of fields.

How Illustrator works

Illustrator artwork consists entirely of "paths" (lines of any shape and length) and the areas they define. At a glance, the program's tools may seem unimpressive, compared with those of competing packages: no arc tool, no polygon tool, no horizontal- or vertical-line tool. No grates, radiating lines, rounded rectangles, fountains, automatic shadowing, arrowheads and fill patterns are to be found in the program — just paths.

"Closed paths" form shapes that can be filled with any shade of gray or color. "Stroked paths," which are visible lines or outlines, may be assigned a thickness and shade of their own, along with a dash pattern, "line cap" and "line join." (The last two terms refer to the styling of lines at the end of segments and at corners.) Paths can be endlessly edited: reshaped, cut (with a "scissors" tool), combined, duplicated, scaled, rotated, "reflected" (in mirror image), and "sheared" (slanted along any angle).

Illustrator can be used to create original artwork from scratch, but the program is best suited to tracing bit-mapped pictures previously created with another graphics program or brought in from a sketch or printed illustration by way of a digitizing scanner.

Once the graphic has been converted into Illustrator's lines and shapes and saved as a series of PostScript commands, it becomes "device independent." Regardless of the resolution of the screen on which it was drawn, the graphic will print on any PostScript printer at the maximum resolution of the printer (300 dpi in the case of the Apple LaserWriter, many times that in the case of the Linotronic and other advanced output devices) with much cleaner lines and higher resolution.

The conversion is achieved in several ways. Typically, an Illustrator document will have two layers. The bottom one will be a template, a PICT or MacPaint document (drawn or scanned) viewed as a 50-percent screen. As yet, there is no way to use a 300-dpi document, such as a TIFF file from a scanner, as a template. The upper layer is the plane on which the actual Illustrator artwork will be created by tracing around the contours of the bit-mapped template. This technique allows for rapid, detailed transformation of clip art and scanned drawings into object artwork.

In the drawing process, Illustrator imitates the way the PostScript language itself works. PostScript page description happens in two steps that are reflected in this program. First, a path in space is defined, then that path is stroked, filled or both. In the page description, however, the path itself always exists, independent of its line weight and style, shading and filling.

On the main Illustrator screen, all that is visible is a collection of lines representing the paths that make up the artwork under construction. Through dialog boxes, the artist assigns each path its attributes. Only then, by printing out the file or going to Illustrator's Preview window, is it possible to see the image.

This approach has several advantages. Every path is always easily accessible by clicking directly on it, regardless of what layer it is on. Since there is no memory-intensive shading to be done, redrawing time is relatively fast. And accuracy in the placement of additional paths is not hindered by shading, line thickness or overlapping objects.

On the other hand, the Illustrator approach lacks the immediate visual feedback that artists are accustomed to. To see what they have wrought, artists must either rely on their imagination or continually interrupt the creative process to preview their work.

Illustrator does allow two simultaneous views of the same document. With the Artwork and Preview screens open, changes made in the Artwork screen are reflected in the Preview screen. There are several problems here, though. Setting aside screen space for the Preview means taking it away from a work area that is already minimal, unless a large screen is in use. And redrawing the image in the Preview window is very slow, even on a Macintosh II.

Given Illustrator's approach, the heart of the program is the tool used to create paths: the pen. It operates differently from any other freehand drawing tool on the Mac.

In other programs, selecting a tool and dragging it across the screen describes a path across the image, like applying a pen or brush to paper. In Illustrator, on the other hand, one defines points in space with mouse clicks called "anchor points," and the program fills in the path between. Illustrator art is like a children's "connect-the-dots" drawing in reverse. This in itself is likely to be a major block for traditional artists looking for a transition into computer design.

Another major block may be the techniques for reshaping a path: not just moving the anchor points, but also manipulating the end points of non-printing lines drawn tangent to the path at each anchor point. (On screen, these tangents look a little like knitting needles.) The end points of these lines are called "direction points." When the distance between a direction point and an anchor point is changed or when the end points are dragged in an arc around the anchor, the shape of the path segment is changed.

The end result is that the experienced and patient user has an extraordinary level of control over the final output, but the procedures are complex and anything but intuitive.

Getting up to speed with Illustrator is not a quick and easy process, even for users intimately acquainted with other computer-graphics software. The only solution seems to be hands-on experience. The manual provides some practical tips but makes no effort to explain the geometry behind the program's procedures.

Even with experience, high-quality results require long and intensive work. Every path must be defined point-by-point, and each area to be filled and line to be stroked requires another dialog box. There are no separate tools for shading, spray-painting or patterning, as in paint programs. Undoubtedly some novice users will fall by the wayside, finding it simply too tedious and frustrating not to be able to outline and fill their art directly.

Adobe does provide a number of features and shortcuts that make it somewhat easier to work with Illustrator. There are nine possible levels of magnification, ranging from 6.75 percent of actual size to 1,600 percent of actual size. All operations of the program can function at any level. At each level, the display is remarkably accurate, and the displays become more exact with each enlargement (though anomalies occasionally show up). Shifting views is done with a magnifying glass tool, which is available from the keyboard at any time.

Keyboard commands for almost every function in the program greatly increase the smoothness and speed of work once they are mastered. The ruler, however, has a curious and annoying limitation: It is marked only in points and pixels, with no options for other measurements.

Adding text

Illustrator also will work with text — in a strictly limited way. The program works best with texts of few words, such as titles, captions and labels on drawings. Once created, text blocks act like any other graphic object and can be moved and transformed in many ways, with often impressive visual effects.

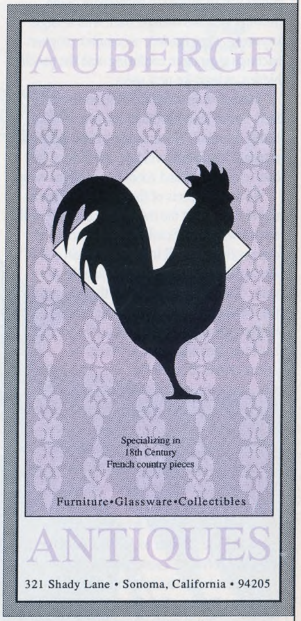
But the blocks are limited to 256 characters, and each block is treated as a unit in terms of font, size, justification and kerning. Considering the potential for sophisticated text manipulation in PostScript, it is surprising that Illustrator offers so little control in this area.

Compatibility

Illustrator will not import any graphic images from the Clipboard, though it will paste text into a text block.

Illustrator artwork is saved as pure PostScript or as Encapsulated PostScript Format for either the Mac or the IBM. The file can then be opened in PageMaker 2.0, Quark XPress, Ready,Set,Go! and Word 3.0, among others. Any path or paths also can be selected and copied onto the Clipboard with Option-Copy and then transferred directly to these programs.

In sum, Illustrator is an impressive program. It has already set new standards for the world of computer-generated graphics and desktop publishing. Everyone will enjoy the art that professional artists using Illustrator will be producing, but not many of us are likely to have the expertise and patience to use the program ourselves. ■ — *Byron Brown contributed to this article*


AUBERGE
Specializing in
18th Century
French country pieces
Furniture•Glassware•Collectibles
ANTIQUES
321 Shady Lane • Sonoma, California • 94205

The Auberge Antiques advertisement was created in Illustrator by Adobe Systems Inc.

LaserPaint

LaserWare Inc. ☆ ☆
P.O. Box 668, San Rafael, Calif. 94915
(415) 453-9500
$322 (street price); **$495** (list price)
LaserPaint integrates a variety of graphics tools, including some powerful ones unavailable in any other package, but its interface is unfamiliar and cumbersome. Copy-protected.

LaserPaint, which bills itself as "the integrated graphics workstation," attempts to bring word processing, drawing, painting and page layout together in a single program.

It is designed as a high-powered productivity tool for the graphic artist and offers some innovative tools not available in other programs, notably powerful airbrush and masking capabilities. Unfortunately, the program is difficult to learn and cumbersome to use.

LaserPaint's most serious flaw is a clumsy user interface. Its tool panels, which we found cluttered and unattractive, normally occupy a third of a regular Mac screen, a severe restriction for a graphics application. Although both panels can be hidden to show more of the drawing area and brought back with a single keystroke when needed, a complex program becomes even more confusing with the panels hidden, at least for new users.

Instead of the standard Macintosh interface, LaserPaint substitutes its own, which is hardly intuitive. The drawing palette is not a standard Macintosh window; scroll bars, title bars, close boxes and zoom boxes are missing.

So many aspects of the interface are unfamiliar that all but the most dedicated user will be overwhelmed. Scrolling, for example, is done with two small tools on the right end of the tool chest, the page matrix and the joystick. The page matrix allows the user to move the viewing window in gross increments within the eight-page drawing area. The joystick is used for finer adjustments. While the effectiveness of scroll bars as a technique for navigating the screen is debatable, LaserPaint's approach is less intuitive and more difficult to use.

LaserPaint's basic drawing environment is similar to SuperPaint's in that there is more than one mode of operation, each with its own set of tools. SuperPaint has two such modes, draw and paint, both of which function in ways that are familiar to users of other Mac graphics software. LaserPaint has five such modes, each with its own tool panel: Drawing, Painting, Writing, Goodies and Laser. While this offers much more power than SuperPaint, many of the basic drawing, painting and text editing functions operate in unfamiliar ways.

With most Macintosh paint programs, for example, the user can sit down and start drawing with almost no instruction. It is much like working with a paint brush, scissors and glue. But before painting in LaserPaint, the user must draw a "bit box" to contain the art. Likewise, in other programs, moving a portion of a painting is a simple matter of selecting and dragging the mouse. In LaserPaint, this basic action requires careful planning because it is not possible to drag selected art outside of its bit box. If the current bit box does not contain the destination for the selection, the user must enlarge the bit box before moving the art or create a new bit box to receive it. Furthermore, even though the contents of several overlapping bit boxes appear on screen to be part of the same contiguous drawing, their contents must be cut and pasted separately.

Despite these annoyances, LaserPaint does offer some impressive graphic capabilities. The most striking of these is the airbrush. Diameter, flow rate and spray pattern (regular or spatter cap) can be set by the user. There also is an auto-airbrush. This is similar to the fountain function available in Cricket Draw, but LaserWare has gone beyond what Cricket offers. Both programs allow "fountains" (filling an enclosed shape with varying shades of gray), but Cricket Draw allows only three preset types of fountains, whereas LaserPaint allows the user to create a fountain based on the shape of the object itself. Unfortunately, this effect does not show on the screen, which may give the impression it does not work. It does, however, print properly.

Another of LaserPaint's highlights is its unique masking capabilities, a more flexible — if more difficult to use — alternative to the "Bring to Front" and "End to Back" functions common in other graphics applications. Both the drawing and painting tool panels have masking functions. There are three types of masks. The opaque mask, when applied to a drawing object or a bit box, protects the contents of the masked area and constrains subsequent drawing and painting to the area outside the mask. The ghost mask also constrains drawing and painting to the area outside the mask but erases the area enclosed by the mask. The stencil mask allows drawing and painting within the mask area but not outside of it. When combined with the airbrush, LaserPaint's masking capabilities facilitate the creation of some kinds of complex artwork that would be all but impossible to generate in other programs.

LaserPaint also provides the most advanced color-selection scheme available to date on the Macintosh. The tool chest, available regardless of which tool panel is selected, gives the user access to a Pantone color configuration window. Based on the four-color separation technique used extensively in the printing industry, this window allows the user to select the color for any object, drawing, bit box or text by entering its Pantone number. There is even a correction factor for coated or uncoated paper. LaserPaint automatically calculates the correct percentages for the black, cyan, magenta and yellow separations. Up to 48 colors out of 500 possibilities can be applied in a single document.

These color selections, when used with features available on the Goodies and Laser tool panels, allow the user to generate correctly registered four-color separations for an entire drawing. In theory, these can be taken to a printer, who can make plates directly from them. The manual encourages the user to experiment with a LaserWriter. In practice, however, the LaserWriter has insufficient resolution to generate high-quality black-and-white halftones, let alone four-color work.

A Linotronic does considerably better, but producing final film for four-color printing is still a complex technical process with demands not apparent to the inexperienced user. Skilled graphic artists may find this feature valuable for limited applications. But while LaserPaint's Pantone color configuration is a step in the right direction, it is only a half-step, and one that may create more problems than solutions for unsuspecting users.

Since LaserPaint is better suited to creating artwork than integrating various elements of a layout, the question of file imports and exports is important. While its designers clearly gave some thought to this issue, LaserPaint exhibits some quirky behavior. Both bit-maps (paint files) and object-oriented drawings (PICT files) can be imported via the Clipboard or from the Scrapbook, but PICT files are converted to bit maps. The manual claims that importing 300 dpi TIFF files also is supported, but we were unable to import such files created with our scanner. Since different scanner manufacturers implement the TIFF "standard" differently, this may be a problem with our scanner software. Nevertheless, it represents an incompatibility that users may encounter.

The original version of LaserPaint contained a complicated, two-step process for saving a file in ESPF format for export into page-layout programs such as PageMaker 2.0. LaserWare reports that the version now shipping to dealers and being sent to registered owners solves the problem with a single simple menu command.

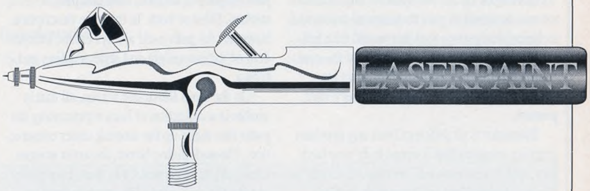
LaserPaint is copy protected. It requires the use of a key disk, which is requested about one-third of the time upon launch. We found this protection scheme to be quite annoying.

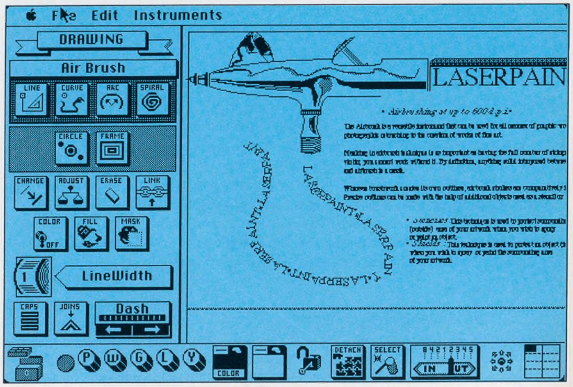
Documentation

LaserPaint's documentation is weak. The manual is one long tutorial in 19 chapters. What is dubbed a reference section is merely a glossary. To find out how a particular feature works, the user must wade through an elaborate tutorial explanation of that feature. Furthermore, there are almost no illustrations in the manual. Since many of LaserPaint's functions are not intuitive, the least the manual could have provided is a thorough set of screen shots to accompany the tutorial text.

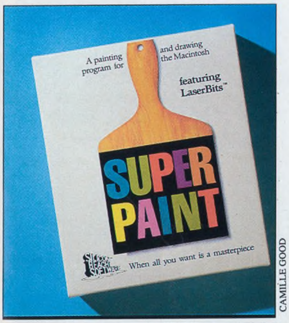
Recommendation

There is undoubtedly a market for an integrated application that can combine all the elements of page makeup that LaserPaint attempts to combine, but LaserPaint falls short of its goal. Its interface is cumbersome, confusing and counter-intuitive, and it breaks with Macintosh standards with more abandon than benefit. The documentation is ponderous, poorly organized and poorly illustrated. As a result, despite breakthroughs in the development of specific graphic tools and techniques, LaserPaint is a major disappointment. ■ —
By Henry Bortman





LaserPaint has powerful tools like an airbrush, but its interface is cluttered and unfamiliar.



CAMILLE GOOD

SuperPaint

Silicon Beach Software Inc. ☆ ☆ ☆ ☆
9580 Black Mountain Road, Suite E
P.O. Box 261430
San Diego, Calif. 92126
(619) 695-6956
$55 (street price); **$99** (list price)

A remarkably versatile program at a bargain price, SuperPaint brings enhanced bit-map painting together with object-drawing capaabilities.

If you are looking for one general-purpose graphics program for your Macintosh, make it SuperPaint.

Silicon Beach's combined paint-and-draw software is easy to use, economical and, above all, versatile. It offers all the capabilities of MacPaint while adding enough options and enhancements to make Apple's classic program obsolete. At the same time, SuperPaint incorporates an extensive, if not complete, set of MacDraw-like tools for handling line art, geometrical shapes and text. It integrates these two modes, "bit-mapped" and "object-oriented," in a clever and convenient way and adds some unique capabilities of its own.

Artists, architects and others who create professional-quality art will not want to stop with SuperPaint. But if what you need is a graphics utility program — a tool for enhancing charts imported from other programs, for cleaning up screen dumps and editing clip art or for creating logos and illustrations , SuperPaint will do the job.

Features

As the software's name and documentation suggest, SuperPaint is foremost a bit-mapped painting program intended as a replacement for MacPaint. Silicon Beach obviously listened closely to complaints and suggestions about the Apple program. Compared with MacPaint, SuperPaint offers more of everything:

- More files opening simultaneously. The number depends on available memory. A Window menu brings any of them forward, so cutting and pasting among them is fast and easy.
- More usable screen space. Document size is the same (8 inches by 10 inches), but with the Full Screen and Hide Palettes options, the visible work area can be significantly larger. On a 9-inch Macintosh display, even the menu bar can be hidden. In addition, selections larger than the screen can be pasted, filled or otherwise edited.
- More navigational tools. The grabber hand that moves the "paper" is always available with a touch of the space bar, but horizontal and vertical scroll bars also have been added. When any tool is dragged to the edge of the screen, the image automatically scrolls. (This feature can be disabled with a menu command or keyboard equivalent.)
- More fill patterns, brush shapes and line widths. Where MacPaint has one pattern palette, SuperPaint offers four, including one for various shades of gray, one for line patterns and one for user-designed patterns. All can be easlily edited, as can the 40 available brush shapes — any pixel pattern from any part of the Mac screen can be made into a brush tip. Eight line widths are available, and horizontal and vertical lines can be assigned different widths. Circles, ovals and arcs show a smooth transition between the thickness of the vertical and the horizontal line.
- More magnification options. A magnifying glass tool offers 200-percent and 400-percent close-ups, as well as the 800-percent view familiar from MacPaint's FatBits view. All tools can be used at any of these levels, and the left third of the screen remains in normal or reduced view, so the effects of changes can be seen immediately.
- More control over location. Rulers with measurements in inches, centimeters, picas/points or screen dots constantly display the horizontal and vertical location of the cursor. A grid with intervals set by the user can be displayed or hidden, with or without snap-to capabilities. A handy Nudge command moves a selection one pixel at a time up, down, left or right. The "Paint from Center" option, with the rulers and grid, makes it much easier to place and size shapes.
- More special effects. Stretching, distortion, perspective and free rotation, features available in MacPaint only by way of an add-on Desk Accessory, have been incorporated directly into SuperPaint.
- More precise scaling. A Scale Selection command produces a dialog box into which the user can type the percentage by which the selected area is to be reduced or expanded.
- Better printing. SuperPaint, unlike its Apple ancestor, uses the standard drivers for LaserWriter and ImageWriter output. Spooling software works with the program's file.

In short, nearly every painting tool has been enhanced and every function made more convenient. But what distinguishes SuperPaint not only from the original MacPaint but also from FullPaint, Ann Arbor Softworks' competing entrant in the paint-enhancement race, is its ability to handle both object-oriented and bit-mapped art in the same document.

Each mode has its own "layer" or plane on the screen. Only one layer can be active at once, but art on the inactive "back" layer can be left visible (or hidden) while the other layer is in use. Switching between the two modes is as simple as clicking on the draw or paint icon at the top of the tool palette. The corresponding layer then becomes active, and its tools appear in the palette.

Selections can be pasted from one layer to the other, or the two layers can be printed together, so that object-based charts, for instance, can be easily enhanced with bit-mapped clip art.

Although Silicon Beach has hinted at dramatic enhancements in future releases and left room for additional tools on the palette, SuperPaint's draw layer is not yet a clear-cut improvement over MacDraw. Some of the latter's quirks have been eliminated. Text handling, for example, is more straightforward, and all fonts and font sizes are available. In addition, many of the enhancements to the paint mode — magnification options, custom grids, Draw-From-Center and Nudge commands — also work on the object layer.

But SuperPaint imposes some constraints that do not exist in MacDraw. Though most of MacDraw's most powerful functions, like grouping, locking and alignment, are available in the newer program, others, like duplication, are not. Most importantly, SuperPaint drawings are limited to 8 inches by 10 inches, compared with MacDraw's maximum size of 96 inches by 48 inches. An addendum to the manual stresses that SuperPaint is "not intended to be a replacement for MacDraw."

A special feature of SuperPaint is support for color printing on the ImageWriter II. A menu command or an Option-click on the palette-selection arrows brings up an additional palette with eight foreground and background color choices.

LaserBits, a more dramatic innovation, provides precise dot-by-dot control over the appearance of documents to be printed on the LaserWriter. It lets portions of the paint layer be selected for 300-dpi editing. Because of the large memory requirements for such work, LaserBits selections can be no larger than 2 inches by 2.5 inches, but larger areas can be edited by selecting adjacent sections in turn. Once the editing is complete, the LaserBits are stored as a separate file but also placed in the original document's draw layer. Printing either full-scale or quarter-scale images on the LaserWriter produces very crisp results.

SuperPaint's file formats are unusually flexible. The program can open and write documents not only in its own format but also in MacPaint, PICT (used by MacDraw, other object-oriented graphics software and desktop-publishing programs) and even in the special format used for Macintosh start-up screens.

Documentation and support

SuperPaint's manual clearly explains the program's numerous options and shortcuts. Users should take care, though, to consult the six-page addendum included in the package. A number of changes to the program made in the last stages of development are documented only in this supplement. The addendum also includes a useful table summarizing SuperPaint's several dozen keyboard and double-click shortcuts.

On two occasions, we contacted Silicon Beach about printing problems with LaserBits. The response was helpful and honest.

SuperPaint lacks the sophisticated special features of the other programs reviewed in this issue, but it is quite capable of producing many kinds of complex and effective graphics. And for economy and versatility, it is unmatched by any other currently available program. ■ — *By Henry Norr*

SuperPaint Tsunami & Jerry was created by Mike Schwartzbech of VERBUM of San Diego.

Beta version of new MacDraw holds promise

Almost 30 months after its release, Apple Computer Inc.'s MacDraw holds the honor of being the most widely-used PostScript-compatible drawing program for the Macintosh. Flashy new challengers appear regularly, yet MacDraw is used every day to design everything from simple flyers and organizational charts to complex technical drawings and multipage floor plans.

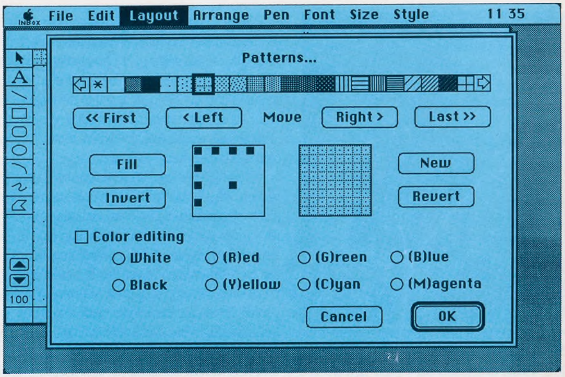
But by software standards, MacDraw is old, and it has quirks and limitations that are past due for correction. Its selection of fonts and font sizes, for example, is notoriously inadequate, character styles cannot be combined within a text block and text-editing is awkward. With complex graphics, scrolling and editing can be frustratingly slow.

MacDraw also has its share of bugs. Arcs, for example, are sometimes calculated and combined incorrectly, and groups dragged across the page or pasted from the Clipboard can end up misaligned. More importantly, products like MacDraft and Cricket Draw have added features the older Apple product lacks. With the release of the Mac II and color monitors, there are many new graphics possibilities.

Along with MacPaint and MacWrite, MacDraw will be a mainstay for Apple's new spin-off software company. Bill Campbell, president and chief operating officer, would not comment on the rumors of an upgrade.

But we looked at an unfinished beta version of Draw Plus that has some intriguing features. A built-in Desk Accessory called Color Picker provides automatic red, green and blue weightings. An on-screen zoom icon shifts the view from 1.56 percent to 3,200 percent of actual size. Dialog boxes allow font and font-size menus, rulers, pens and arrows to be edited (although many of these features had not been implemented in the version we saw). Parts of drawings can be assigned a command key, which immediately brings the region into view.

We do not know when an official MacDraw upgrade will be released or whether it will incorporate the new features we saw, but we liked what we saw in the new MacDraw and look forward to further enhancements to this workhorse program. ■ *— Michael H. Holloway contributed to this report.*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100

This unfinished beta version of "Draw Plus" includes tools for editing fill patterns in color.

Bringing Mac graphics training to the media

With help from professional graphic artists like Nigel Holmes, John Walston, John Monahan and George Roark, The Poynter Institute for Media Studies in St. Petersburg, Fla., introduced the Macintosh into its three-hour newspaper design seminars in 1986.

Poynter, which is affiliated with Florida State University, has since pioneered Macintosh training in the newspaper industry.

Billie Kierstad, the institute's director, says, "We found that people attending our seminars had Macs but didn't know how to use them. So we talked to people in the industry, experts at informational graphics, knowing they would be on the cutting edge. They got us started."

Because roughly 87 percent of all newspapers use Macintoshes, demand for the training has mushroomed.

It all began in April 1985, when Walston at USA Today asked Apple to ship four Macs and a LaserWriter to one of the institute's workshops on print journalism.

"John started the big change in how we conducted our training programs," Kierstad says. "We had only heard of Macintosh. We knew newspapers used them for editing and cut and paste, but John showed us how powerful the Mac's graphics capabilities really were."

As a result of the demonstration, the institute's staff decided to design a comprehensive training program for the Macintosh, concentrating on newspaper design and layout.

"When we decided to use the Mac in the context of our regular seminars, we knew we needed help," Kierstad says.

Roark, who was with the St. Pete News, recommended Monahan. Monahan, now graphics coordinator of the Gannett Graphics Network, was excited by the idea. "John Monahan's enthusiasm was infectious," says Kierstad. "We asked him to develop a series of learning lessons for someone who had little or no knowledge of the Mac."

MacTrac, a Macintosh training program primarily for intermediate and experienced users, evolved from Monahan's work. The institute now conducts between 12 and 15 introductory and MacTrac seminars a year.

"Our regular three-hour seminars are strictly introductory. There is no way to teach someone everything they need to know about the Mac in a short seminar. It takes time to develop a comfortable working style. Most artists resist the Macintosh because they don't want to sacrifice their own style to the machine. You can't expect artists who are used to doing things one way to instinctively use the Macintosh when they don't know how it works," Kierstad says.

Kierstad says the biggest problem facing graphic artists is Apple's hype about how easy the Macintosh is to use. It is true for some applications, but "people develop unrealistic expectations about what artists can do and how fast they can get it done on the Mac," she says. "They don't give them time to learn. Artists spend all their time just working to make a deadline. It's frustrating for some of them when they know they could do better."

The advantages of training are apparent to Kierstad when she compares MacTrac students, most of whom are experienced Mac users, to those who attend the introductory seminars. "The experienced users are relaxed, very imaginative," she says. "The inexperienced people don't know enough to ask about what they don't know."

By the end of the introductory seminars, students are asking countless questions.

"To learn, you need to try things that are difficult for a beginner to learn. It takes time," Kierstad says. "You make a mistake if you don't realize that." ■ *— By Michael Holloway*

Mac adds visual impact to daily news

El Paso Times graphic artists Martha Hernandez and Debra de Yampert-Cooley use MacDraw daily to create charts and maps to go with news stories. For a recent article about educational reforms in El Paso, Texas, schools, they drew detailed charts comparing local students' scores on the Texas Educational Assessment Test to the state average.

De Yampert-Cooley says she still uses pen and pencil, mainly because she and two other staff members share one Mac. "We have only one person at night, and that's me. So I learned MacDraw faster," she says. "Once you start working with it, you get addicted."

She does not think of herself as an expert, however. "MacDraw challenges me. It's not a game. I try to make each one of my drawings more realistic, more elaborate than the last. As I work more with MacDraw, it gets quicker, much faster and easier."

Hernandez, senior graphic artist at the El Paso Times, is not as sure about MacDraw and expresses dissatisfaction with its weaknesses. "MacDraw can't tilt type. I often need one-degree increments. We're looking at CricketDraw and [Adobe] Illustrator. MacDraw is cleaner but not always practical."

Illustrator was designed for sophisticated line drawing. Hernandez especially likes Illustrator's realism and its "dimensionless" quality. She says when MacDraw is not enough, she often goes back to pen and pencil. "We want to try Illustrator. It has more roundness, more '3-Dness.' But from the demonstration we saw, it would take a lot longer to learn than MacDraw: step by step, maybe three months."

Because the El Paso Times is a member of Gannett Newspapers, the paper has telephone access to an extensive library of news graphics on Gannett Graphics Network, part of the Gannett News Service. The network is maintained and operated for Gannett by General Electric Information Services. Members use BusinessTalk, adapted from Apple's AppleLink communications software, to access the network and download stories and graphics and send memos. Smaller newspapers use telecopiers to receive weather maps.

That will change soon when Gannett joins the Associated Press' advanced GraphicsNet and PhotoStream this fall. AP's electronic graphics and photograph transmission services will permit papers like the El Paso Times to load weather maps and other camera-ready art directly into the Macintosh.

Newspapers buy commercial news services like GraphicsNet and Knight-Ridder's PressLink to supplement their news coverage and art departments. Gannett News Service is available only to member newspapers, which may access news stories and graphics freely.

"At the El Paso Times we serve a large area of southeast New Mexico and southwest Texas," says design editor Nan Keck. The Times also is distributed in nearby Mexico. "Most of our news is regional, so locator maps for small towns and intercity stories are a big part of our work. For national and international stories, we save time by downloading graphics and stories from Gannett."

Artwork on the network is exclusively MacDraw. "What's important is linking graphics to stories so they match," says John Monahan, coordinator of the Gannett Graphics Network. "MacDraw is possibly the [newspaper] industry standard because it was the first to create object-oriented graphics. MacDraw also produces compact files for network transmission. Cricket Draw has some file compatibility, but most of our member papers already use MacDraw."

Besides his duties as system operator, Monahan annotates graphics files for editors who access the network looking for illustrations. A graphic artist himself, Monahan says he tries to make the graphics on the network interesting and useable.

"Most good MacDraw artists are unknown because the technology is so new," says Monahan. "It's a big brand-new technology. We're setting standards every time we load a drawing on the network. There are shining stars among our papers' artists. You see them every time you open a Gannett newspaper." ■ *— By Michael Holloway*

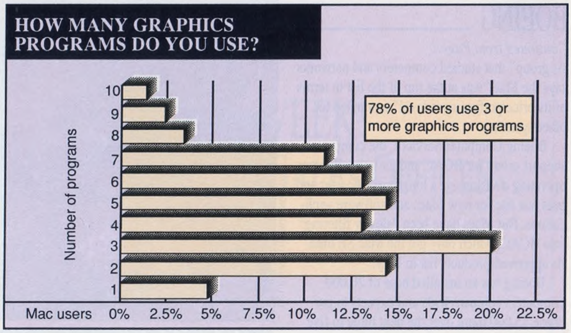
Focus: Graphics software

BY BILL LANGENES
Creative Strategies Research

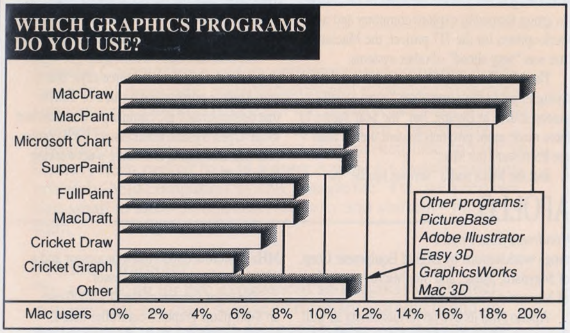
Ninety-seven percent of the Macintosh users responding to a survey said they use a graphics program. Only eight users of the 301 questioned said they do not use a graphics program, according to the telephone survey conducted for MacWEEK in May by Creative Strategies Research of Santa Clara, Calif..

In addition, 78 percent said they use three or more graphics programs, including painting, drawing, illustrating and drafting software, further demonstrating the Macintosh's versatile graphics capabilities. Fewer than 5 percent use only one graphics program.

The largest portion of users — 20 percent — use three programs to create graphics, while just more than 14 percent of the respondents said they use five graphics programs.


HOW MANY GRAPHICS PROGRAMS DO YOU USE?

78% of users use 3 or more graphics programs


WHICH GRAPHICS PROGRAMS DO YOU USE?

Other programs: PictureBase Adobe Illustrator Easy 3D GraphicsWorks Mac 3D

No package takes large marketshare ...

A wide variety of graphics software is used by respondents, but only four programs — MacDraw, MacPaint, Microsoft Chart and SuperPaint — are used by more than 10 percent of the Mac users surveyed. No package had a marketshare greater than 20 percent.

MacDraw and MacPaint are used by the greatest number of respondents. Both programs have been available from Apple since 1984, when the Mac was introduced. MacPaint was included with every Macintosh from January 1984 until January 1986.

The third most widely used graphics programs are Chart from Microsoft Corp. of Redmond, Wash., a business charting program, and SuperPaint from Silicon Beach Software of San Diego, a painting and drawing application. Both were mentioned by 11 percent of the respondents. Other graphics programs and the percentage of respondents using them include: FullPaint from Ann Arbor Softworks Inc., 8 percent; MacDraft from Innovative Data Design, 8 percent; Cricket Draw from Cricket Software, 7 percent; and Cricket Graph from Cricket Software, 6 percent.

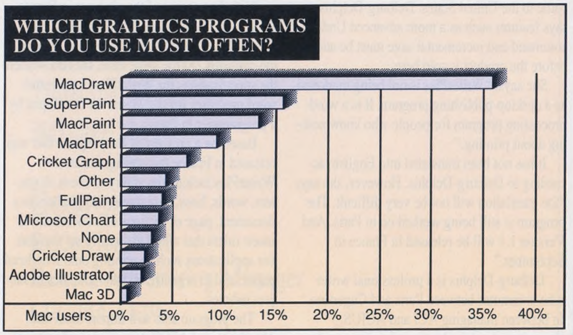
... but MacDraw used most often ...

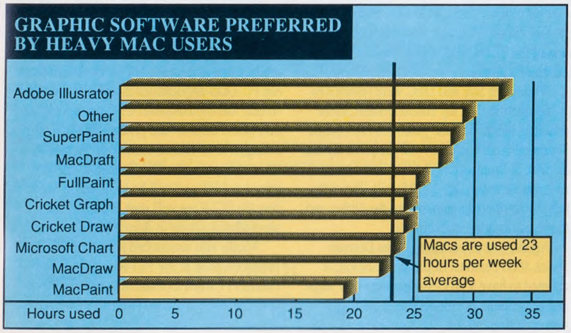
MacDraw is the favorite graphics program of the majority of respondents; 36 percent of respondents said MacDraw was the program they used most often. This is especially significant because almost 93 percent of users have two or more graphics programs.

However, the selection of MacDraw as the program used most often is not surprising since it also is used by the greatest number of respondents.

The ranking of other graphics programs does show varying usage patterns. For example, although SuperPaint ranks fourth among programs used, it ranks second among programs used most often, which may be an indication of the versatility of its integrated paint/draw functions. MacPaint, a single-function program, drops to third among programs used most often. Another example is MacDraft, which jumps from sixth place among programs used to fourth place among those used most often.

Microsoft Chart ranks eighth among graphics programs used most often, a significant drop from the third place ranking among programs used.


WHICH GRAPHICS PROGRAMS DO YOU USE MOST OFTEN?


GRAPHIC SOFTWARE PREFERRED BY HEAVY MAC USERS

Macs are used 23 hours per week average

... and heavy Mac users prefer Illustrator

For another perspective on Macintosh graphics software usage, the programs respondents use most often were correlated with the average number of hours per week respondents use a Macintosh. Among those surveyed, Macs are used an average of 23 hours per week. Respondents using their Mac more than the average number of hours are considered heavy users.

The heaviest users, averaging 32 hours per week on their Mac, prefer Adobe Illustrator from Adobe Systems Inc. of Palo Alto, Calif., a professional-level illustration program introduced earlier this year. Users spending an average of 28 hours per week on their Mac prefer SuperPaint.

The other graphics programs preferred by heavy users are MacDraft, FullPaint, Cricket Graph and Cricket Draw. Light users prefer MacDraw and MacPaint programs.

The MarketWEEK survey is conducted exclusively for MacWEEK by Creative Strategies Research, a high-technology research and consulting firm based in Santa Clara, Calif. For this survey, U.S. corporate and other volume users were randomly selected from the MacWEEK subscriber database. Respondents were surveyed by telephone during May and 301 usable questionnaires were obtained. The industries and geographical distribution represented in the sampling reflect general U.S. demographics.

BOEING

Continued from Page 1

sis group" that studied computers and networks says the Mac "was at the top of the list in terms of its price/performance level" compared to other systems.

Boeing Computer Services, the computer support group for BCAC and the other Boeing operating divisions, is a longtime Mac user and beta test site for new Macs and software applications. But Macs have been "slowly filtering" into BCAC, which only got the Mac SE onto its approved-products list in May.

Boeing has an installed base of 20,000 computers companywide and expects to purchase 15,000 more over the next three to five years. The 7J7 project, which will receive a large portion of the new computers, has been targeted to take "the brunt of newness" in terms of workstations and networking, according to a source at the company.

The 7J7 uses sophisticated new technology in its propulsion system, which uses counter-rotating fans; its fuselage, which will incorporate composite materials rather than metal; and its aerodynamics. And the design system itself is also planned to be state-of-the-art.

COURTESY THE BOEING CO.

Boeing has decided to use Macintoshes in its development of the 7J7 jet. The Mac's networking capabilities were the key to its selection.

"We're trying to build planes differently," says a source at Boeing, by using a team or "peer-networking" system. That means the Mac's "network-ability" was key to its acceptance on the project.

Several sources within Boeing hailed Apple's recent acquisition of a minority share in Touch Communications, a Scotts Valley, Calif.-based networking company, as a masterstroke that "really kicked Apple in the door." According to one former member of the analysis group formed to explore computer and network options for the 7J7 project, the Macintosh line was "way ahead" of other systems.

The Mac II and IBM's new PS/2 are "both trying to get to the same place," says a well-placed source at Boeing, but "the Mac seems to have made more progress toward the PS than the PS toward the Mac."

But the Macs had a "serious hurdle" to overcome, says the former analysis group member: the difficulty of hooking Macs into Boeing's vast system of installed computers.

The Mac II's open architecture got it partway over the hurdle, the source says. But it was Apple's purchase of a share of Touch that demonstrated the company's commitment to the Open System Interconnect (OSI) protocols that are critical to Boeing's networking system. ■

ACIUS

Continued from Page 1

WriterPlus in the U.S.," says Delburg-Delphis, "I will wait as long as needed to make the program fully functional."

Through CompuServe, users of WriterPlus in France have fed rumors that the product may come to the United States. Delburg-Delphis says features such as a more advanced Undo command and incremental save must be added before the product is sold here.

She says, "WriterPlus is not being marketed as a desktop-publishing program. It is a word-processing program for people who know nothing about printing."

It has not been translated into English, according to Delburg-Delphis. However, she says "the translation will not be very difficult. The program is still being worked on in Paris. And Version 1.1 will be released in France in September."

Delburg-Delphis is a professional writer who commutes between Paris and Cupertino. In between managing ACI and ACIUS, she writes about the history of perfume and fragrance for publications such as Le Monde, a Paris-based newspaper, and Vogue magazine.

In 1984, having hired Laurent Ribardiere to customize a perfume database for her Apple III, Delburg-Delphis acquired ACI, a struggling hardware and software company based in France. She switched from the Apple III to the Macintosh and rehired Ribardiere — this time to develop a file manager for the Mac that ACI could sell on the mass market.

With the success of the program in France, she decided to found ACIUS and asked Guy Kawasaki, a former Apple evangelist, to head the company. At the same time, she had written the specifications for WriterPlus, a powerful word processor for the Mac to be developed by a programmer in Paris.

Based on a preview of the program that was released in France this spring, features of WriterPlus include the ability to count characters, words, lines, paragraphs and pictures in a document, page or sections of a document; to insert rulers that allow the user to set margins for applications such as printing onto letterhead paper; and to organize text and graphics in subject indexes.

The program also will import MacPaint, MacWrite and ASCII documents; automatically hyphenate words; set line length by characters; search and replace by font, size, style, words and phrases; automatically renumber sections and subsections; and use limited database and spreadsheet functions. ■

TOOLBOX

Continued from Page 1

Kline. "You can tell it to create a text window, zoom in and zoom out." MacWorkStation provides graphic interface elements such as windows, scroll bars, dialog boxes and buttons.

MacWorkStation includes printing and filing routines. It is independent of the networking media, Kline says, but Apple is looking into shipping the product with a variety of networking protocols, including TTY, asynch and AppleTalk. The product should further open up the market for Macs as front ends to mainframe computers, including IBM and DEC machines.

Developers have to realize that while some packages are migrating from mainframes to microcomputers, the vast majority are going to stay on the mainframe, he says.

"Apple is trying to give an incentive for corporate departments to build a Mac interface," says Tim Farrell, president of Future Soft Engineering Inc., a developer of interface products. ■

APOLLO

Continued from Page 1

range workstations by Digital Equipment Corp. of Maynard, Mass., and Sun Microsystems Inc. of Mountain View, Calif.

Apollo "has its eye on its customers as well as its competitors" in offering new machines and enhancements that provide "more functionality and higher performance at lower costs," Thomas Vanderslice, Apollo CEO, says. He also says Apollo is looking to broaden its base in CAD/CAM and software engineering markets, as well as penetrate new markets such as the financial services and architectural engineering."

The Apollo announcement, coupled with the recent announcements by DEC and Sun, "have been aggressive, to say the least," says Carl Machover, an analyst with the White Plains, N.Y.-based consulting firm of Machover Associates Corp. But he also says, "We're not near the end" of the price/performance wars. "There's still another 20 to 30 percent that the machines can go down."

Sun responded to the announcement with skepticism. "Sun pioneered a 4-Mips machine (the 3/200) in August 1986," says Chris Saleh, a senior product manager at Sun, adding that the DN-4000 "is a quick response to the success of our 3/200 workstation" and "is a box in search of a market."

While both Sun and DEC were referred to as "competition" at the announcement, there was little mention of the Macintosh II. A configuration chart enclosed with the press kit had the Mac II listed as an entry-level machine comparable to the DN-3000 family, but with little or no upgrade path toward the higher end of the workstation marketplace.

Apollo's new workstation, the Domain Series 4000 Personal Super Workstation, is claimed to have a processing power of 4 Mips and is available in monochrome, color and server configurations. The machine uses a 25-MHz Motorola 68020 microprocessor and a 68881 floating-point coprocessor.

The color version of the DN-4000 uses an 8-bit-plane graphics controller board, providing 256 simultaneous colors out of a palette of more than 16 million colors. Apollo offers a variety of color and monochrome monitors.

Pricing for standard, diskless workstations range from $12,400 for the server to $18,900 for the 15-inch color model. Fully configured stand-alone systems range from $23,900 for the monochrome model to $33,900 for the 19-inch color version. First shipments of the DN-4000 are not expected until August.

Apollo also cut the prices on its low-end DN-3000 workstations by as much as 50 percent. Pricing for existing 19-inch monochrome models ranges from $5,990 to $9,990, cut from $11,900 to $16,400. The prices for color configurations now range from $8,900 to $16,900, down from the $16,900 to $25,900 range. The monochrome model is being offered solely in a diskless version. It will sell for $4,990 and will not be available in quantity until December.

Thrown in with the other announcements was the Domain/PC Emulator, a software product that will allow Apollo workstations to run PC-DOS applications in a window on the screen, and the Domain/PCI-Ring, a combination hardware/software product that will allow a single PC to be connected to an Apollo token-ring network. The Emulator will be priced at $500 and will be available in September; the PCI-Ring will start at $1,200 and should be available in November.

Apollo also announced it is developing a product similar to the PCI-Ring that would connect PCs to a Domain network via Ethernet. The product, called Domain/PCI-Enet, is scheduled for release in early 1988. ■

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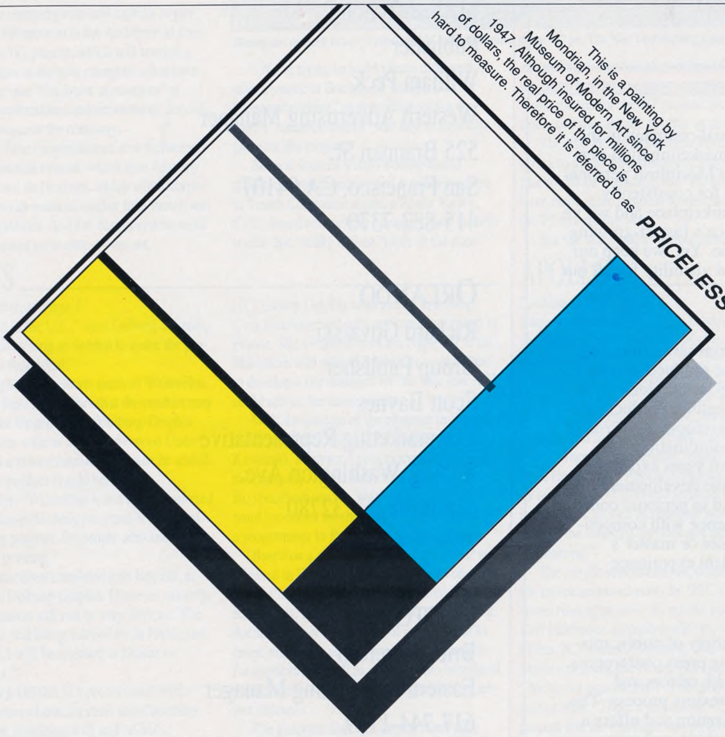
2.	(1)	Microsoft Word (Microsoft)
3.	(4)	SuperPaint (Silicon Beach)
4.	(9)	TOPS (Centram Systems)
5.	(8)	MacDraw (Apple)
6.	(-)	Printshop (Broderbund)
7.	(17)	Cricket Draw (Cricket)
8.	(16)	Illustrator (Adobe)
9.	(7)	MacWrite (Apple)
10.	(5)	Excel (Microsoft)
11.	(3)	PageMaker (Aldus)
12.	(22)	MacInTax (Softview)
13.	(14)	FullPaint (Ann Arbor)
14.	(-)	MacLink Plus (Apple)
15.	(-)	Ready,Set,Go! (Letraset)
16.	(-)	MacWorks (Apple)
17.	(-)	Switcher (Apple)
18.	(18)	MacPaint (Apple)
19.	(-)	SuperLaserSpool (SuperMac)
20.	(-)	Accounts Receivable (Interactive Planning)
21.	(-)	Scenery VII (subLOGIC)
22.	(-)	General Ledger (Interactive Planning)
23.	(-)	MacFile (Microsoft)
24.	(10)	MacDraft (Innovative Designs)
25.	(-)	MicroPhone (Software Ventures)

Based on March and April sales to retail stores


This is a painting by Mondrian, in the New York Museum of Modern Art since 1947. Although insured for millions of dollars, the real price of the piece is hard to measure. Therefore it is referred to as PRICELESS

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MAC THE KNIFE

The spirit of the summer solstice has moved us, Emily. From now on, are the rumors, like the days, dwindling down to a precious few?

"I have always thought you were in the autumn of your years, Mr. Knife," typed Emily, MacWEEK's electronic ingenue. "Can you deliver or not?"

Can The Knife deliver? Apparently better than the Big Apple can deliver the color monitors. The BBS banditos are moaning high and wide about the screwy deals they're having to cut to get delivery on IIs, to say nothing of a color monitor. The only alternative seems to be going with Sony's 1302 monitor, which, as we all know by now, is not exactly the same as the monitor Sony is to build for bundling with the Mac II.

What has not been known is that as of last week, Mac The Knife's pal says, an "acceptable" version of the monitor is not even in production. Reportedly, Apple and Sony are in the midst of a "spitting" contest about the specifications.

Sony says its monitor meets the specs, but Apple keeps bouncing them back. Seems there's a nasty little horizontal line that develops in screens that use a preponderance of black. Video engineers, though, says those lines sort of come with the territory. Whatever. If it's not settled soon, the fall harvest might be a bit less than expected.

More from the palette: Sony will have competition at the retail level. PCPC (Personal Computer Peripherals Corp. of Tampa, Fla.) is twisting the dials on its color monitor. Look for it in Boston.

From the Silicon Valley ore-chard: There's a new version of MacDraw making the rounds. Some blokes pulled it down from a BBS. It's version 1.95, an indication that the forthcoming upgrade may be a modest one. However, this beta version — called "Draw+" — does support color. Some have even described it as "spectacular."

Furthermore, it packs zoom in/out capabilities, filling a 19-inch screen with image. It will, Emily, open several views of an object of different sizes and toggle between them, and the artists can draw in multiple overlays, which remain in registration.

The downside? Not much, Ol' Mackie hears: The color isn't good enough to do color separations. (What do you want for 50 or 100 bucks, anyway?) Different color layers can be printed in registration, but you can't rotate the screens to eliminate moire effects.

Emily, recall what I told you last week about Deneba pulling back its products from that outfit in Florida?

An interesting move, prompting a parade of romance-minded software company presidents to head for Deneba to try sweet-talking a distribution deal. Watch this space for further developments.

***

Your mug will runneth over, a MacWEEK mug that is, if you deliver an appropriate tip to The Knife. MCI: "MactheKnife." He's waiting. ■

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